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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

Vol. 10. No. 1278 — Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y., Under Act of March 3, 1879. — NEW YORK, THURSDAY, AUGUST 21, 1930 — 10 Cents. $12 Per Year

DEALER CAR STOCKS PUT AT 350,000

NEW WHIPPET FOUR TO MAKE ITS PUBLIC DEBUT SATURDAY

Complete Details of the New Line Will Appear in Automotive Daily News for Friday

TOLEDO, O., Aug. 20.—A new line of Whippet Fours, featuring many advancements in design and equipment, with no increase in price, will be announced to the public Saturday by the Willys-Overland Company. A complete description of the new line will appear in Automotive Daily News Friday.

Fundamentally, the new Whippet Four will follow closely the design of the previous model of the same line. Refinements which have been incorporated in the new line ,the makers claim, will give it added beauty, increased riding comfort, smoother operation and increased safety with longer life.

The sedan model of the new line will continue to be sold as the lowest-priced four-door sedan on the market. The improvements which have been made in the new models are offered at no additional cost. In addition to the line of passenger bodies the commercial chassis has also been continued.

Four years have elapsed since the first Whippet Four made its bow to the American public.

A. P. I. REPORTS SLIGHT CRUDE OIL OUTPUT DROP

New York, Aug. 20.—The American Petroleum Institute estimates that the daily average gross crude oil production in the United States for the week ending Auust 16, 1930, was 2,463,550 barrels, as compared with 2,480,350 barrels for the preceding week, a decrease of 16,800 barrels. The daily average production east of California was 1,843,-250 barrels, as compared with 1,864,-250 barrels, a decrease of 21,000 barrels.

Imports of petroleum (crude and refined oils) at the principal United States ports for the week ended August 16 totaled 1,860,000 barrels, a daily average of 265,714 barrels, compared with 1,585,000 barrels, a daily average of 223,571 barrels for the week ended August 9, and a daily average of 278,607 barrels for the four weeks ended August 16.

H. M. RYAN TRANSFERRED BY MANUFACTURERS FINANCE

New York, Aug. 20.—The Manufacturers' Finance Corporation announces that H. M. Ryan, vice-president of the Manufacturers' Finance Corporation, New York city, has been elected vice-president of the Manufacturers' Finance Company, Baltimore, national headquarters. Mr. Ryan will have charge of the company's production activities covering automobile, time payment and industrial financing and will be located in Baltimore after Sept. 1.

TIRE-MILE COST CUT SHARPLY SINCE 1928

Akron, Aug. 20.—Figures of the Firestone Tire and Rubber Company showing tire-mile cost sharp decreases over a period of years, show that the rubber industry has made engieering and distribution progress hard to duplicate in the manufacturing field.

When the recent price and product revisions were announced with the new tire lines of increased quality it was shown that tires give far more mileage and cost much less that they did five years ago.

The Firestone figures show a decrease of 37 per cent. from the period of 1928-1929 to 1930-1931 in tire-mile costs.

In the period from 1910 to 1912 the tire-mile cost was estimated at $0.0112 or more than a cent a mile. From 1919-1921 the cost went down to 0.0030, more than three miles for a cent, and in 1930 the cost went as low as $0.000767, about fifteen miles for a cent, or one-fifteenth of the cost in 1910-12.

The Firestone engineers attribute recent tire-mile cost reductions to the increased mileage afforded by the patented "double cord breaker," which is in effect the addition of two plies of gum-dipped cords under the tread, and obviously gives greater mileage and brings greater freedom from road troubles and consequent reduction of tire-mile cost.

JULY SALES IN U. S. TOP OUTPUT BY LARGE MARGIN

Seven Months' Excess of Production This Year Was Only 9 Per Cent., as Compared With 18 Per Cent. in 1929 Period

NEW YORK, Aug. 20.—Stocks of new passenger cars now on the floors of retail dealers in the United States are estimated at approximately 350,000, or about seven cars to the dealer. This is a sub-normal supply and emphasizes the fact that the manufacturers are continuing to avoid overproduction and the forcing of dealers.

Within recent weeks car stocks in the hands of dealers have been reduced from around 3:0,000, as of uly 15, and 417,000 as of June 1. The peak in car stocks held by dealers was reached this year around May 1 when they numbered about 440,000. This compared with a peak in 1929 of 559,000, reached during April of that year. The current stocks are estimated to be 30 per cent. lower than last year at this time.

During 1929 dealer stocks continued at a high level through the year, with both manufacturers and retailers overestimating the public demand for cars in the last half of the year. The result was that dealer stocks at the close of the year amounted to slightly more than 400,000. With the factories making progress in their inventory reduction program, it is now estimated that dealer stocks at the close of the current year will be not much more than half what they were at the close of last year.

Such a condition would mean much for both the dealers and manufacturers. They could enter the new year with full stocks of new models and not be handicapped with the surplus stocks of early 1929.

Much progress was made by dealers in July in reducing their new car stocks. This is evident from the estimated production of passenger cars in that month, as compared with the estimated registra-

(Continued on page 9)

STEWART-WARNER NET FOR HALF $1,528,863

New York, Aug. 20.—The Stewart-Warner Corporation has issued its complete report, including subsidiaries, for the six months ended June 30, 1930, showing net profit of $1,-528,863, after depreciation, Federal taxes, etc., the same as reported in preliminary statement. This is equal to $1.17 a share (par $10) on 1,299,-390 shares of capital stock, and compares with $4,528,372, or $3.70 a share on 1,224,000 shares, in first half of 1929.

Net profit for the June quarter was $872,852, after above charges, equal to 67 cents a share on 1,299,-390 shares, comparing with $656,010, or 50 cents a share on 1,298,919 shares in preceding quarter, and $2,474,148, or $2.02 a share on 1,224,-000 shares, in second quarter of previous year.

Balance sheet as of June 30, 1930, shows total assets of $32,074,687, comparing with $34,934,302 at end of June, 1929, and profit and loss surplus $16,776,825 against $18,517,-446. Current assets were $13,979,512 and current liabilities $1,803,962, as compared with $16,658,589 and $2,-862,694, respectively, on June 30, 1929.

Consolidated income account for

(Continued on page 5)

Proposed Ottawa Ban on U.S. Made Cars Would Hit Detroit

WINDSOR, Ont., Aug. 20.—An outright ban on importation into Canada of motor cars completely manufactured outside the Dominion is sought from the federal government at Ottawa by officials of Windsor and seven of its adjoining municipalities.

The Canadian government also will be asked to conduct a survey of the motor car industry with a view to determining what additional manufacture of motor parts can be undertaken to advantage in the Dominion.

The two proposals were included in a resolution addressed to the new administration at Ottawa which were adopted by heads of the border municipalities at a joint conference called to consider the present unemployment situation in the light of reports indicating that about 4,400 men are out of work in Windsor's metropolitan district.

It is estimated that the proposed ban on completed motor cars would affect Detroit manufacturers adversely to the extent of about $40,-000,000 a year.

Details of Installment Financing Are Announced

WASHINGTON, Aug. 20.—Supplementing the summary of retail automobile financing figures for June, issued yesterday, the Department of Commerce today issued full figures for both retail and wholesale business for June and the first six months of the year.

Volume of wholesale financing in June was $64,915,231 against $63,216,-578 in June, 1929, and $82,803,381 in May of this year. During the first half of 1930, wholesale financing aggregated $422,048,044, compared with $354,935,992 during the corresponding period of last year.

New car financing in June amounted to 157,874 vehicles, on which $89,939,011 was advanced, compared with 203,632, $121,842,467, and 168,614, $93,506,638, the figures respectively for June, 1929, and May, 1930.

Used car financing in June amounted to 166,560 vehicles, on which $48,688,483 was advanced, against 164,023 cars and $50,205,848 in June of last year, and 167,296 and $48,487,788 in May, 1930.

Total of 8,418 vehicles were financed, with advances of $3,261,-084 in the list of unclassified financing, compared with 16,865 and $6,935,520 for June, 1929, and with 8,310 and $3,297,588 in May of this year.

Aggregate of unclassified financing of automobiles for the first six months of the year was 44,860, with advances of $18,047,447 against 88,-305 and $36,993,416, the corresponding figures for the first half of 1929.

Total number of automobiles financed during June, as announced yesterday, was 332,852, on which was advanced $141,888,578, reports Com-

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R. I. July New Car Sales Increase 5.7% Over June

NEW YORK, Aug. 20.—New car registrations in Rhode Island in July were 5.7 per cent. greater than in June, but were 27.7 per cent. under the same month a year ago. In the first seven months the decrease was 24.4 per cent., as compared with the same period a year ago.

Ford sales in July were greater than in June this year and July a year ago. Other makes showing gains over the same periods were Buick and De Soto. Makes showing gains over June, but being under July, 1929, were Cadillac, Chrysler, Franklin, Hudson, Hupmobile, La Salle, Marmon-Roosevelt, Packard, Pierce-Arrow, Studebaker, Whippet and Willys-Knight. Oakland had a gain over July, 1929, but was under June, 1930.

In the first seven months Ford had a gain of 571 units over the same period a year ago.

Marquette and Oakland were ahead of the 1929 period, while Chrysler was thirty-two units behind, De Soto twenty-nine units below a year ago and Lincoln nine units behind.

The registration for July, as com-

(Continued on Page 7)

UTAH GASOLINE TAX GAINS OVER LAST YEAR

Salt Lake City, Aug. 20.—Revenues of the state from the tax of 3½ cents a gallon on gasoline sales during the first half of the year amounted to $1,000,077, a gain of $128,530 over the corresponding period of 1929. June income from this source was $204,965, compared with $192,660 for June last year.

Wisconsin and Minnesota July Car Sales Top June

NEW YORK, Aug. 20.—Showing substantial recoveries over the preceding month, retail sales of new passenger cars in Wisconsin and Minnesota in July reached totals of 7,385 and 6,790, respectively. This was a gain of 9 per cent. for Wisconsin over the 6,764 registrations in June, and an increase of 6 per cent. for Minnesota over the June total of 6,379.

For the first seven months of the year retail sales of new passenger cars in Wisconsin amounted to 55,946, as compared with 74,827 in the corresponding period of last year, a decline of 25 per cent., practically the same as the drop for the country as a whole.

In Minnesota the sales for the first seven months amounted to 51,913, as compared with 63,708 in the corresponding period of last year, a loss of 18 per cent., a better record than that of the entire country.

The July registrations in Wisconsin were 46 per cent. below the 13,902 in the corresponding month of last year, while the Minnesota total was 37 per cent. below last year, when the July total was 10,771. On the basis of returns from the first fifteen states, it is estimated that the decline in sales for the entire country in July from a year ago was slightly less than 40 per cent.

In Wisconsin registrations in February and March exceeded those of the corresponding period of last year, while in Minnesota the February and April sales were in excess of a year ago.

Following are the new car registrations in the first seven months, for the two states, as compared with the corresponding period of last year:

WISCONSIN

	1930	1929
January	4,407	4,461
February	4,423	3,813
March	8,903	5,345
April	9,571	13,780
May	14,493	19,827
June	6,764	13,699
July	7,385	13,902
Totals	55,946	74,827

MINNESOTA

January	2,581	3,082
February	3,372	3,114
March	7,226	9,188
April	14,501	12,546
May	11,064	15,469
June	6,379	9,538
July	6,790	10,771
Totals	51,913	63,708

The new American Austin car is beginning to make its appearance in the registration returns. In Wisconsin, in July, 24 of these cars were registered, while in Minnesota 33 appeared on the list. In Wisconsin Austin was No. 22 and in Minnesota No. 21 among all the cars registered.

Both Ford and Chevrolet registrations in Wisconsin showed a substantial increase over the preceding month, while in Minnesota the Ford showed a small loss and the Chevrolet a slight gain.

Following are the new car registrations in the two states for July, as compared with the corresponding month of last year, and with the preceding month:

WISCONSIN

	July 1930	July 1929	June 1930
Ford	2,794	4,544	2,591
Chevrolet	1,781	2,681	1,666
Plymouth	341	494	330
Buick	290	585	207
Pontiac	231	707	207
Nash	216	493	199
Chrysler	165	254	168
Studebaker	163	339	146
Willys	163	*	122
Oldsmobile	150	444	138
Essex	144	682	160
Dodge	142	318	170
De Soto	109	222	71
Graham	91	231	96
Durant	85	178	46
Hudson	81	283	71
Oakland	76	130	60
Whippet	58	695	69
Packard	55	58	50
Hupmobile	52	97	36
Willys-Knight	29	121	22
Austin	24	†	—
Cadillac	24	10	14
Marmon	22	87	19
Auburn	18	38	19
Reo	15	36	21
Franklin	12	33	14
Peerless	11	16	10
Viking	11	12	6
La Salle	9	16	6
Pierce-Arrow	9	34	15
Lincoln	5	10	1
Cord	2	†	2
Jordan	1	3	2
Stutz	1	5	1
Windsor	1	1	0
Miscellaneous	4	45	5
Totals	7,385	13,902	6,764

MINNESOTA

Ford	2,772	4,611	2,789
Chevrolet	1,777	1,900	1,725
Plymouth	350	437	392
Pontiac	165	521	181
Chrysler	158	151	139
Willys	149	*	124
Studebaker	137	199	116
Oldsmobile	106	234	104
Dodge	105	188	93
Essex	102	388	92
Packard	99	72	32
Graham	93	161	93
Nash	90	186	78
Whippet	85	616	67
Hupmobile	79	81	53
Hudson	53	125	35
Oakland	50	72	37
De Soto	47	78	43
Durant	46	160	23
Willys-Knight	34	143	25
Austin	33	†	..
La Salle	26	26	14
Marmon	18	32	12
Reo	17	22	13
Auburn	16	29	7
Cadillac	14	4	6
Lincoln	11	6	3
Pierce-Arrow	6	12	2
Franklin	4	4	2
Viking	4	13	2
Gardner	2	3	3
Peerless	1	7	1
Windsor	1	2	1
Miscellaneous	0	14	1
Totals	6,790	10,771	6,379

*Then the Whippet Six.
†Not in production.

WHEEL SPECIALISTS ORGANIZE IN ATLANTA

Atlanta, Ga., Aug. 20 (UTPS).—Formation of the Wheel and Axle Alignment Company here, with offices at 21 Baker St., N. W., has just been announced. The firm, which has been formed by A. H. Murrell and D. F. Treadwell, both well known in Atlanta automotive circles, will specialize on the alignment without heating of wheels and axles.

SPARKS from DETROIT

Wilson Speaks for Reo

* * *

Chevrolet Truck Record

* * *

On Business Conditions

* * *

WILLIAM R. WILSON, general manager of the Reo Motor Car Company, is planning greatly enlarged operations for his company in the near future.

"Reo's largest year's volume in the past was approximately $55,000,000," Mr. Wilson said the other day. "This represents about two and a half times turn-over of Reo's working capital. There is no reason why this turn-over should not be built up to ten times, which would mean an annual gross volume of $200,000,000."

W. H. WILSON

He also says that the Reo factory has sufficient capacity for a much larger production without additional expenditures. The highest production attained by Reo in the past was an average of about 250 units daily.

Not long ago, on issuance of its second quarter statement, it was disclosed that Reo had invested more than a million dollars in new machinery since January 1, and that its expenditures in experimental work and other forms of engineering had proceeded on a normal basis as compared with 1929, in spite of the general decline in business.

It might also be remarked that Mr. Wilson has been greatly strengthening the sales personnel of the organization in the field and at the home office.

Reo at the present time is in the limelight as far as activities are concerned and automobile men in Michigan are expecting big things from this organization in the near future.

Mr. Wilson, while retaining his residence in Detroit, due to his many business activities, is giving most of his time to Reo and is apparently making a record.

* * *

CHEVROLET is greatly pleased over the showing it has made with its light delivery trucks this year. During the first half of 1930 the company produced 27,326 of these trucks, compared with 22,613 in the first half of 1929, or an increase of 20 per cent.

The company first began building commercial vehicles in 1916, and since that time has turned out 1,169,000 units, a ratio of better than one commercial car to every six passenger cars.

* * *

A well-known automobile manufacturer told me the other day that he was of the opinion that reports emanating from Detroit regarding the motor car business gave conditions as much worse than they really are.

He based his opinions on remarks heard from many visitors at his plant who seemed to be surprised to find everything operating on a practically normal basis. Inquiry indicated that a considerable number of visitors seemed to have formed the opinion that motor car production in the city was on a very low basis and that some of the factories were not working.

This, of course, is not the case. All of the factories are working. Of course production does not begin to equal the figure of last year, but that is not to be expected.

* * *

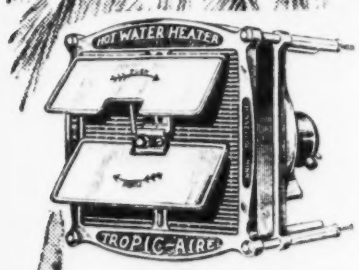
Inventories at the motor plants at the present time are extremely low and indications are that they will remain that way. No large buying has been going forward and, in many cases, supplies are only enough to cover a fifteen-day period.

Many lessons have been learned by automobile makers this year, as they have discovered that they can economize in many ways, not in materials or methods of manufacture, but in buying especially, and in carrying the proper stocks of these materials.

TROPIC-AIRE

Trade Mark Reg. U. S. Pat. Off.

The Original Fan Equipped Hot Water Automobile Heater



Standard Model Tropic-Aire

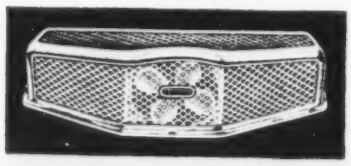
Built for installation under instrument board—in three sizes—the senior for large cars, the Junior for medium sized cars, the Ford for Ford Model "A" cars.

Tropic - Aire construction is engineered by men who pioneered hot water motor car heating.

Tropic-Aire is sturdy. It gives years of trouble-free service. It is easily removed and reinstalled in a new car.

The long list of Tropic-Aire advantages makes it an easy seller, and every sale nets a big profit. Get the facts from your distributor's salesman or direct.

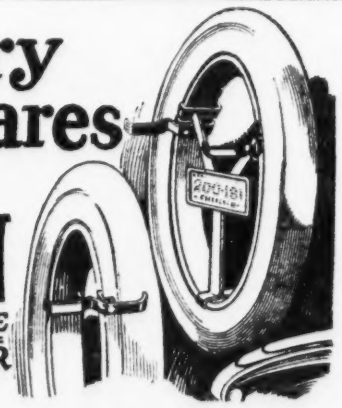
TROPIC-AIRE, Inc.
105 Eleventh Ave., N. E.
Minneapolis, Minnesota
In Canada:
14 Breadalbane Street, Toronto
52 Adelaide Street, Winnipeg
Pat. Nos. 1581761, 1668491, RE17131. Others pending.



The New Rear Compartment Heater

Installed at back of front seat or under rear seat—a perfect heating plant for Town Car, Limousine, Taxicabs, the larger Coaches or Sedans. Independent or operates in unison with front heater.

Carry 2 Spares with T-N EXTRA TIRE CARRIER



DEALER'S JOY

AN EXTRA TIRE and tube, an extra rim, another tire cover, all go on the same cash ticket with T-N Double Carriers. This means joy for the dealer, and comfort, freedom from tire trouble worry, for the car owner.

RETAIL PRICE { Chevrolet 6, 1929-30, $4.00 / Other Cars, $3.00 Per Set

Thompson-Neaylon Mfg. Co.
3545 South Morgan Street
Chicago, Ill.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

N. Y. Service Association's Committees Are Appointed

NEW YORK, Aug. 20.—Nine standing committees to serve until June 30, 1931, have been named by Daniel C. Kelly, newly elected president of the Automotive Service Association of New York, Inc. The committees will begin functioning formally when the monthly educational meetings of the association are resumed September 11.

The initial fall meeting will be held in headquarters of the Traffic Club in the Park Plaza Hotel. An informal dinner will precede the educational program. A question box will be introduced for the first time as a feature of the educational gatherings.

Committees named by Kelly are as follows:

Social—Charles Michaels, Michaels & Mourre, Inc., chairman; P. J. Durham, P. J. Durham Company, Inc.; P. E. Kaiser, Zenith Carburetor Company; William C. Miller, William C. Miller & Co., Inc., and Arthur Smith, Smith & Gregory, Inc.

Program—Thomas Hilton, Electric Storage Battery Company, chairman; R. J. Adams, General Motors Export Company; A. C. Bergmann, Bumpers, Inc.; David X. Clarin, Oakite Products, Inc.; John F. Creamer, Wheels, Inc.; A. B. Cumner, Cumner Auto Services, Inc., and Edward J. Rabidoux, Buick Motor Company.

Membership—Louis K. Teller, Daily News, chairman; Lee Commerford, Johns-Manville Corporation; H. M. Diggs, Shurseal Piston Ring Company; L. B. Lockwood, Bethlehem Equipment Corporation; Morris R. Machel, Fleet Owners List Company; Fred Nutchey, Dodge Motors, New York, Inc., and Walter R. Ray, Lubrication Engineering and Sales Company.

Technical—Edward P. Sullivan, Warren-Nash Motor Corporation, chairman; Matthew J. Farrell, C. H. Jennings Corporation; Fred Lackington, Packard Motor Car Company; Joseph E. McLaughlin, Eleto Company; William E. Marsh, Marmon Automobile Company; H. E. Pengilly, Standard Oil Company of New York, and William H. Wilson, National Carbon Company.

Motor Truck—Louis J. Heinrich, Autocar Sales and Service Company, chairman; W. E. Bartlett, Diamond T Motor Car Company; T. A. Davis, Federal Motor Truck Company, Inc.; A. J. Lambert, Brockway Motor Truck Corporation; J. K. Moser, Ward La France Truck Corporation; W. G. Sternberg, Jr., Sterling Motor Truck Company, and Carl Woerner, Larrabee Deyo Motor Truck Company.

Fleet—A. G. W. Brown, Borden's Farm Products Company, chairman; V. H. Best, National Sugar Refining Company; Herman J. Harms, Otto Stahl, Inc.; William M. Higgins, Loft, Inc.; C. W. Magnussen, Ludwig Baumann & Co.; H. V. Middleworth, Consolidated Gas Company, and W. H. Robe:.s, Central Motors Repair Shop.

Publication — R. B. Lawrence, Studebaker Corporation, chairman; Joseph Ball, Reo Motor Car Company; J. E. Corker, Packard Motor Car Company; Oscar A. Eskuche, Warren-Nash Motor Corporation; John F. Gfrorer, Hudson Motor Car Company; Adolph Klein, Fifth Avenue Coach Company; Paul H. Ohne, Walter H. Nowill Corporation; G. W. Stroll, Simons, Stewart & Foy, Inc., and Carl Woerner, Larrabee, Deyo Motor Truck Company.

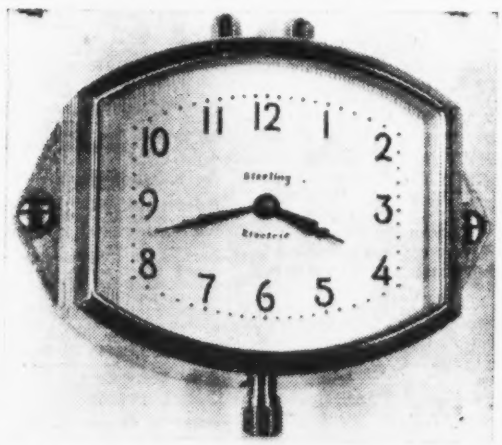
Independent Shop—A. B. Cumner, Cumner Auto Services, Inc., chairman; Harry Adkins, Imported Maintenance, Inc.; N. W. Durnin, Houpert Machine Company, Inc.; M. Hallen, Hallen Welding Service, Inc.; F. John Kruse, Kruse Motor Company, Inc., and John Theurer, Theurer Wagon Works, Inc.

Reception — Webb E. Traphagen, United Motors Service, Inc., chairman; E. H. Austin, Timken Roller Bearings Company; Glenn E. Babcock, Theodore Luce, Inc.; Cecil Billings, Vacuum Oil Company; Charles J. G. Doherty, Municipal Asphalt Plant; Edwin C. Krieger, E. Krieger & Son, Inc.; Sidney R. Milburn, B. F. Goodrich Rubber Company; Harry Miller, Utility Oil Corporation; M. Gerard O'Beirne, Rele Motors Corp.; Fred Barber, Van Alstyne Motor Corporation; J. Howard Pile, Cumner Auto Services, Inc.; Robert P. Breese, Bragg-Kliesrath Corporation; Frank E. Dawson, Automobile Club of America, and Dan M. Stall, American Spring Brake Company.

APPROVAL EQUIPMENT LISTED IN WASHINGTON

Seattle, Wash., Aug. 20.—The Commission on Equipment, in the state of Washington, of which William Cole, chief of the state highway patrol, is chairman, Charles R. Maybury, director of licenses and secretary and Samuel J. Humes, state highway engineer, the third member, has just issued new list of approved devices for use in this state. The commission's bulletin No. 20 is directed especially to adjusters of headlights for automobiles.

Sterling Clock Company, Inc., Features Two New Models



THE Sterling Clock Company, Inc., of La Salle, Ill., is offering new models in electric clocks for automobiles.

The new Sterling is precision built, jeweled and accurate. It operates automatically from car battery. Takes less current in a year than the dashlight does in two hours, the makers claim.

There are two models, the dash and overhead.

The Sterling electric clocks are standard equipment on many cars.

Editor's Column

SALES of machinery and equipment so often are dependent upon a trade-in of older or inadequate machinery that the methods used by a group of machine tool distributors to combat the problem should be of interest to jobbers faced with the same problem.

All distributors know that trade-in difficulties often disturb sales programs and that the trade-in gives the seller with an inclination to cut prices a decided advantage. According to The Business Week, a group of twenty-two distributors of machine tools in the Chicago district have apparently solved the problem by working together to separate the trade-in from the sale. They have presented an outline of their plan to the Federal Trade Commission for its official approval.

The plan utilizes a central office where all trade-in machinery is listed. A distributor has an opportunity to sell a new piece of machinery but is requested to take an older piece in trade. He calls the central office, describes the used machine by name and number and inquires if any other distributor has offered it as trade-in. He then tells the central office what he is willing to pay in cash for the used machine.

If any competitor wishes to bid on the used machine he makes an offer which he is obliged to fulfill in cash unless the first distributor decides that he is willing to increase his bid to equal or better the competitor's price. No matter which distributor finally makes the sale of new equipment, the one making the highest bid for the trade-in is obliged to pay for that used machine in cash.

This feature, which makes the high bidder take the trade-in whether he makes the sale of new equipment or not, effectively dampens wild offers for the used equipment to get new equipment business.

According to the description of the plan it has been particularly effective in meeting the jockeying of buyers who often tell a distributor that a competitor has offered them a certain price on a piece of used machinery and try to use that offer in getting a better bid. Adoption of the plan has disclosed that in 85 per cent. of the deals no competitor is called, so that the allowances often mentioned by buyers are plain "horse-trading" statements employed to force a higher trade-in allowance.

CUNNINGHAM COVERING MINNEAPOLIS DISTRICT FOR LYON METAL, INC.

Minneapolis, Aug. 20.—U. M. Cunningham has recently become associated with the automotive division of the Lyon Metal Products, Inc., as a field representative for the Minneapolis territory.

U. M. Cunningham

Mr. Cunningham has a wide acquaintance among automotive jobbers and dealers in the Minneapolis territory. He was associated six years with United Motor Service, Inc., Detroit, covering Montana, South Dakota, Wisconsin and Minnesota. Recently he worked for the Apollo Magneto Corporation, Kingston, N. Y., traveling in the Minneapolis territory.

"YOUR policies have always been fair and in the Dealer's favor, and our service problems have been very few and very inexpensive."

—West Side Motor Co.
Seligman, Ariz.

Write or wire for franchise details

WILLYS-OVERLAND, Inc.
TOLEDO, OHIO

WILLYS-OVERLAND SALES CO., LTD., TORONTO, CAN.

PARKER'S PLAN
For Compensating Retail Salesmen

The Trouble With Your Business Starts Farther Back Than in Your Used Car Department. Write for the Remedy to This Great Chronic Ailment the Retail Sales Industry Is Suffering With.

* * * *

THE ADVANTAGES TO THE DEALER ARE:—

The Parker Plan for compensating Salesmen carries with it a plan for their direction which is automatic, simple and so inexpensive that we don't even have to talk about that.

1 It enables the proprietor to attract salesmen into his organization because he is able to tell them that they can earn money every day in the year.

2 It forces the proprietor or Sales Manager to become familiar with the details of the salesman's work, thus it enables him to better direct his work.

3 It fosters team work, because the plan paves the way for others in the institution than the salesman himself to meet the prospect.

4 It gives the salesman an income each week; further, he can face his family as an earner and provider every day in the week instead of confessing his failure to make a sale day after day, often for long periods at a time.

5 It dresses up the job of being an automobile salesman and makes it more attractive to salesmen in other industries.

6 It automatically provides a sure way to know the definite cost of making sales, as well as the cost of working upon prospects who do not buy.

7 It eliminates the doubt, suspicion and general misgivings connected with the drawing account-commission plan and salary-and-bonus plan.

8 It puts an end to the argument as to whether the salesman himself or the dealer controls the salesman's time on the straight commission plan, either with or without drawing accounts.

9 It forestalls any argument as to demands upon salesmen to put on "canvasses."

10 It reduces the rapidity of turn - over on retail sales forces.

* * * *

THE PARKER PLAN DOES THIS:—

(a) It pays a retail salesman for everything he does.

(b) It causes him to do everything he is paid for.

Let's cut out all this foolish milling around and evading the salesman's pay issue and think clearly on the subject, and face the situation.

The biggest drag on the automobile industry has been and still is the slipshod way we have been paying off the boys.

No wonder salesmen from other lucrative industries shy away from the automobile field.

If you think the dealer racket is a tough one, how would you like to go to work under your own plan of salesman's pay?

Here's the laughable part:

The salesman's wife isn't any too happy, nor does she make it any happier for her man, because she doesn't understand why it is that when he goes through the slump that every business and salesman experiences occasionally, the longer he works the more he owes the house. Now doesn't that sound funny? But it's true.

And doesn't the banker get a lot of kick in looking over an automobile dealer's statement and find listed among the assets several advances which can be canceled merely by the salesmen's quitting? And he usually quits at the end of a hard pull, making a fresh start for a competitor at the season's height.

Just as jokable is the fact that the salesman sells a wad of "plus items," and yet when the time comes to figure his commission it is *minus* this and *minus* that.

Money cheerfully refunded in case of any dissatisfaction.

Good Business Is in Sight Be Prepared for It

$3.00 Send Order and Check To:
CARL PARKER
929 W. Michigan Av., Lansing, Mich.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
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On Being Licked

WE had occasion recently to visit a number of automobile dealers in the eastern section of the country. In the course of a single afternoon we made five calls. In three of the offices we received invitations to go out and play golf and in the fourth the boss suggested a view of the yacht races that were being held nearby that day. All these dealers advanced as a reason for golf or yachting the fact that "there isn't any business, so what's the use in sticking around on a nice afternoon?"

In the fifth office we found a dealer in his shirt-sleeves and about as busy as a man would care to be on a hot day. The only invitation we received from this dealer was one to look over his sales records for the year to date. He was extremely proud of the fact that his 1930 sales were only a few units behind his 1929 level. "And we're going to beat the record before the year is over," this energetic person assured us.

We asked him how he had been able to do so well in a year that is just as much sub-normal as 1929 was supernormal. "That's easy," he answered. "We've all worked about twice as hard. My boys are all on their toes every hour of every day. They are ringing door bells from 10 to 5 and you would be surprised how many sales they are making among people who had made up their minds not to buy a new car this year. The whole credit for our showing is due to the boys; every man of them is working just about twice as hard as he did last year."

There is a whole lot of food for thought in that statement. The human tendency is to take it for granted that you are licked when a bad year comes along, and begin looking forward to "a break." But the man who will resist the temptation to follow the line of least resistance and "take it lying down," the man who will fight hard times instead of yielding to them, will make every year a good one.

Wheat for Cattle

SOME commentators are openly taking the position that the recent drought of unholy memory, is actually a blessing in disguise. The serious damage to the corn crop, some students of agricultural matters hold, will induce the feeding of wheat to cattle. The corn crop usually is largely used as cattle feed, while wheat is what is known as a cash crop.

The use of wheat as cattle feed is by no means unknown. In the past when the prices of wheat and corn have reached a state of near parity, a good deal of wheat has been used as feed. This year wheat prices are below corn levels and it would be natural to expect farmers to try to realize on their wheat by way of meat animals.

If the shortage of corn induces the feeding of wheat to cattle and prices for meat animals stay at a satisfactory level, there may be more money available in the agricultural states than we recently have expected. Anything that will lift the buying power of the granger states will be a definiltely favorable factor in the revival of business, particularly is this true of the automotive field.

Independent vs. Chain

"COMPETITION for the customer's dollar, between the independent retailers and group distributors will serve as a spur to greater efficiency for the benefit of the buying public," says Frank Cunningham, president of Butler Brothers in Chicago.

Mr. Cunningham does not believe that chain distributors ever will drive energetic and efficient independents out of business. Lazy, stupid and incompetent independents will be pushed to the wall, but they probably would have been any how, regardless of chain competition.

Ask Us to Tell You—

IN THIS service department, The Automotive Daily News is actuated by the desire to help readers solve their problems, whether these are merchandising, technical or in the field of general automotive information. We shall be glad to have our readers ask us any questions pertaining to the automotive field.

In some instances readers may desire information which will require an expenditure of money to secure, and in such cases we shall be glad to get the desired data at the least posible cost, or shall inform our readers where they may obtain it most economically and expeditiously.

In cases where the reader desires an immediate reply, we would suggest he inclose a self-addressed and stamped envelope.

Discussion of Hazards of Methanol Anti-Freeze Continues

RATHER a heated controversy seems to be developing, regarding the possible dangers of methanol (wood alcohol), as an anti-freeze agent, following a recent article in The Automotive Daily News.

We are today in receipt of a letter from the Du Pont Ammonia Corporation, which purposes marketing a methanol anti-freeze compound this fall, which says in part:

"It may interest you to know that the Du Pont company consulted with one of the country's foremost pharmacologists before deciding to market methanol as an anti-freeze. And further, in co-operation with other manufacturers of synthetic methanol, has requested the Bureau of Mines, Pittsburgh Experimental Station, to make exhaustive tests in order to have some authentic data as to the relative toxicity of methanol and other materials usually used in and around garages.

"You can rest assured that the Du Pont company does not intend ever to risk its good reputation by promoting and selling products of harmful or even questionable character."

Attached is an interesting statement by Dr. Reid Hunt, the noted pharmacologist of Harvard Medical School, which appeared in the August, 1930, issue of Industrial and Engineering Chemistry, as follows:

"It seems that a note on synthetic methanol which I wrote for the Journal (Vol. 17, No. 7, page 763. July, 1925) is being somewhat misinterpreted. You may remember the circumstances under which I prepared this note: Newspapers were carrying articles stating or implying that the synthetic methanol, unlike the wood distillation product, was not poisonous. You sent me samples of the two methanols and I tested them on animals and found their action to be identical in every respect; both showed the same cumulative effects and, when continued for a sufficient time, invariably caused death.

"These results apply to the action of the methanols when taken internally and do not necessarily have any bearing upon the use of the product for many technical purposes. Thus, it is difficult to think of any conditions under which the dangers from exposure to the vapors or to the liquid of methanol used as an anti-freeze would be as great as those inseparably connected with the formation of carbon monoxide from the gasoline or from the fumes of gasoline itself, or from those of benzol, etc. (if such were present in the 'gas').

"Ordinary precautions on the part of garage owners and attendants, such as proper ventilation and cleanliness, which would eliminate the dangers from the carbon monoxide, gasoline, benzol, etc., would eliminate hazards due to methanol."

On the other side those who claim that the use of methanol in industry or as an antifreeze solution, quote a list of authorities, which seem to indicate the existence of toxicity in deliterious quantities. The following opinions are taken from a recently published pamphlet:

"There are . . . records in the scientific literature indicating that the repeated administration of methanol . . . to the human skin may cause methanol poisoning and blindness.

"To sum up, it would seem that the indiscriminate substitution of synthetic methanol for ethyl alcohol in . . . anti-freeze solutions . . . would involve a serious hazard to the health of the people."—Dr. Carl Voegtlin, professor of pharmacology, United States Hygienic Laboratory, May 29, 1930.

"A number of cases of permanent blindness have followed the inhalation of its (methanol) fumes . . . Several cases have also been reported in which the external application of methyl alcohol . . . has led to serious poisoning."—Dispensatory of the U. S. A. twenty-first edition, 1928.

"We . . . emphasize the results of our skin absorption tests, which show that methyl alcohol may be highly toxic when absorbed through the skin. We also wish to emphasize the fact that . . . constant exposure to small doses produces cumulative degeneration in internal organs."—Henry Field Smyth, Jr., University of Pennsylvania, June 26, 1930.

". . . The toxicity of methanol is well recognized. It may enter the body in toxic quantities through the portals of skin, the nose in inhalation, the mouth in ingestion."—Dr. Carey P. McCord, Industrial Health Conservancy Laboratory, Cincinnati, O., 1929.

"Poisoning from wood alcohol has been known for many years on account of its extensive use in the arts as a solvent for paints, varnishes, etc. . . . In addition to its destructive effects on the optic nerve and the central nervous system, wood alcohol is also very depressant for the heart and blood vessels."—Dr. David I. Macht, Johns Hopkins University, 1929.

"It makes little or no difference whether the toxic dose (of methanol) is taken by mouth or breathed in as a vapor through the lungs. . . . The above evidence indicates that such anti-freeze mixture (containing methanol) are a potential source of danger."—Floyd DeEds, pharmacologist, United States Public Health Service, 1930.

"Of these newer eye poisons, methanol is probably the most dangerous. So serious are its effects on the retina and optic nerve that total blindness almost invariably results from long-continued exposure to it."—American Labor Year Book, Vol. X, 1929.

"Methanol containers should warn the user against breathing vapor and allowing the liquid to remain on the skin." United States Bureau of Standards, May 8, 1930.

"Methanol is a strong poison. Its action on the nervous system is extraordinarily powerful and often results in blindness . . . It is a fact that vapors of methanol can have a very potent effect on the nervous system, producing inflammations of the nerve centers and finally blindness." Chemical Markets, February 10, 1927.

"Wood alcohol is an extremely poisonous substance and may be taken into the system, either by absorption through the skin, inhalation of vapors by the lungs, or through the mouth and stomach tract. Many cases of blindness have resulted from exposure to wood alcohol vapors." Andrew F. McBride, commissioner of labor of New Jersey, November 15, 1924.

With experts differing as completely as they seem to do in the present case, there will be unusual interest accruing in the tests that are now being conducted by the experimental station of the Bureau of Mines.

RUMBLE SEAT HANDLES

The Editor, Automotive Daily News:

The motor car manufacturers by introducing the rumble seat into roadster and coupe construction have gone a long way toward making monkeys of rumble seat riders. To forestall a complete reversion to type, it would be quite in order for some enterprising manufacturer to provide grab handles to facilitate the entrance to and exit from these seats. The ladies would be especially appreciative.

This is an opportunity to do a good turn for humanity. Good luck to those who can provide this assitance on their new models. To the others, in the words of the old actor, "May all their children be acrobats."

acrobats." **W. J. Z., Sunnyside.**

FIRESTONE OPENS FIRST STATION IN BAY STATE

Cambridge, Mass., Aug. 20.—First step in a huge program of dealer one-stop service stations to be established all over Massachusetts by Harvey S. Firestone of the Firestone Rubber Company was formally opened to the public at Kendall Square August 18. This new building is one of the finest service stations in the state, covering service in every automobile line, including tires, gas, oil, greasing, brake repairing and testing, car washing and polishing, vacuum cleaning and battery service. Harvey S. Firestone came to Boston especially to assist in the dedication of the building.

Cambridge automobile dealers staged an automobile show in connection with the opening, when the latest models were on exhibit.

BOWMAN PROMOTED

Portland, Ore., Aug. 20.—R. H. Bowman, for the past nine years in charge of used car sales for Talbot Casey, Inc., Ford dealers, has been appointed new car sales manager.

COMING EVENTS

AUGUST

26-28—**Chicago, Ill.** Society of Automotive Engineers aeronautic meeting in conjunction with National Air Races.

SEPTEMBER

22-26—**Chicago, Ill.** American Society for Steel Treating meeting at Stevens Hotel.

29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6- 7—**Reading, Pa.** Pennsylvania Automotive Association Convention.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Roadbuilders' Association Convention.
7- 8—**Detroit, Mich.** Society of Automotive Engineers production meeting at Book-Cadillac Hotel.
14-15—**Syracuse, N. Y.** New York State Dealers' Association Convention.
16-25—**London, England.** Olympia Motor Show.
23-24—**Pittsburgh, Pa.** Society of Automotive Engineers transportation meeting.

NOVEMBER

4- 7—**Chicago Ill.** National Tire Dealers' Association Convention.
6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
13-23—**Paris, France.** Commercial Vehicle Salon.
17-21—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.

FEBRUARY

7-14—**Los Angeles, Cal.** Automobile Salon.
21-28—**San Francisco, Cal.** Automobile Salon.

STEWART-WARNER NET FOR HALF $1,528,863

(Continued from Page 1)

Six months ended June 30, 1930, compares as follows:

	1930	1929
*Profit	$1,846,966	$5,082,855
Fed'l taxes	175,000	554,483
Inv. write-off	‡143,103	....
Net profit	$1,528,863	$4,528,372
Dividends	1,461,299	1,971,000
Surplus	$67,564	$2,557,372
P. & L. surplus	†16,776,825	18,517,446

Quarter ended June 30:

	1930	1929
*Profit	$1,123,931	$2,781,631
Fed'l taxes	107,976	307,483
Inv. write-down	143,103	....
Net profit	$872,852	$2,474,148
Dividends	324,745	1,071,000
Surplus	$548,107	$1,403,148

*After expenses and depreciation. †After deducting $1,223,986 for patents and licenses expenditures and experimental and development expenditures on new lines. ‡Provision for writing down book value of investments in marketable securities to market value at June 30, 1930.

OTHER FINANCIAL NEWS

FORD OF ENGLAND

Translated into American currency at par, the earnings of Ford of England for the period from December 7, 1928, to December 31, 1929, amounted to $3,983,259. Dividends paid equaled 10 per cent. on the capital. On the 7,000,000 shares of capital stock, earnings as reported were equal to 57 cents a share.

A total of $3,950,313 was set up as a reserve during the year, which, if derived from income, would add 56 cents a share to the above earnings, making a total of $1.13 a share on the parent company's account.

The statement also fails to include dividends receivable from affiliated companies on account of 1929 operations, nor does it include equities in those companies. Earnings of eight subsidiaries (Italy and Turkey excluded) in 1929 were reported at $7,563,000, in which the British 60 per cent. equity would be $4,467,600, equal to 63 cents a share. Therefore, including all sources of income except two subsidiaries, and assuming that reserves set aside represented a charge against income, the total Ford of England profit in 1929 would be $12,401,172, or $1.77 a share. Reserves equal about half these profits.

The Ford of England balance sheet as of December 31, 1929, converted into American currency and reconstructed to include the equities in eight subsidiaries, follows:

Assets

Patents, etc.	$3,061,427
Good-will	2,558,705
Land, buildings, etc.	7,861,295
Investments	2,561,770
Receivables	11,680,103
Cash	16,219,280
Sundry assets	466,355
Inventories	7,625,272
Total	$52,034,207

Liabilities

Accounts payable	$2,869,147
Employees' investments	174,414
Tax reserves	1,324,035
Depreciation reserves	671,273
Sundry liabilities	142,338
Total	$5,181,207

The above balance sheets show that the parent company's net assets, exclusive of majority interest in subsidiaries and good-will and patents, amount to $24,213,399, or $3.46 a share on the stock. The consolidated balance sheet shows net tangible assets of $41,232,868, giving the shares a book value of $5.89 each.

COMMERCIAL CREDIT

The Commercial Credit Company passed through the depressed conditions of the first six months of 1930 with operating results marked by a moderate decline in volume of financing from the record levels of last year. A sharper recession was recorded in net profits, reflecting chiefly a substantial increase in management expenses which resulted from larger delinquent payments, repossessions and losses.

Net earnings for the common stock, after minority interest and all preferred dividends, totaled $1,141,256, equal to $1.10 a share on the 1,037,052 common shares, compared with $2,249,688, or $2.17 a share, in the first half of 1929, a decrease of 49.2 per cent.

Net income after minority interest and subsidiary preferred dividends was $2,151,256, against $2,809,624 last year, a decrease of 23.4 per cent. This smaller decrease, as compared with decline in earnings for common, reflects the savings in interest charges effected by reduction in notes payable through proceeds from sale of $15,000,000 convertible preference stock in June and July of last year. Dividend payments on company's preferred stocks aggregated $1,010,000 during first half of the current year, against $559,936 in like period of 1929.

Improvement in collection conditions has developed recently, however, with the result that losses and repossessions have been around normal and management costs consequently reduced. As of June 30, last, only 0.47 per cent. of all motor retail time sale notes and 1.42 per cent. of open accounts and industrial receivables were over two months past due.

Trend of profits during the closing six months of the year, a period in which company normally reports over 50 per cent. of total annual income, will reflect developments in the general business situation. In the second half of last year, net profits totaled $3,202,073, equal, after preferred dividend requirements to $2.11 a share on present capitalization. With earnings showing the same comparative decline from 1929 during the second half year as in the first, per share profits in the current six months would exceed $1.30 and would carry net income for the year to over $2.40 a share against $4.33 a share in the full year 1929.

Distribution of company's business during the current year reflects the decline in automobile sales and the recession in foreign markets, as well as intensified sales efforts in miscellaneous industrial fields, with volume of business in this department in the United States and Canada showing a substantial gain over 1929.

Motor lien retail time sale notes outstanding on June 30, last, were $94,105,488, a decrease of 11.6 per cent. from the total of $106,498,110 on June 30, 1929. Customers' liability on foreign drafts aggregated $9,803,028, against $21,255,000 a year previous, a decline of 53.8 per cent. In contrast to these recessions, outstanding open accounts and industrial lien obligations increased to $55,045,863 from $44,565,296, a gain of 23.5 per cent., and represented 34.1 per cent. of all outstanding receivables against 25.7 per cent. in 1929. Total receivables on June 30 were $161,432,294, against $173,212,198 in June of last year, a decrease of 6.8 per cent.

GENERAL TIRE

The General Tire and Rubber Company in the first six months of the present fiscal year cleared enough profit to enable it to meet its regular dividend requirements on both its common and preferred stock for the entire year, it was announced today by W. O'Neil, president of the company.

This means that General stockholders are already assured of the regular payments of $6 a share on the company's preferred stock and 16 per cent. on the common stock.

"During the first six months of the present fiscal year our company produced and sold more General tires than during the same period in 1929," President O'Neil said.

"However, because of the reduced prices at which tires are selling this year, our volume of business in dollars and cents during the first six months of 1930 was 11½ per cent. below that of last year.

"Indications are that the replacement tire business, in which our company engages exclusively, will be better during the last six months of this year than it was during the first six months.

"This is due largely to the fact that while we have had some of the hottest weather for many years, it was slow in coming, and did not arrive until later in the summer than usual.

"When it came, it gave a big impetus to replacement tire sales, which should carry over well into the last six months of the year.

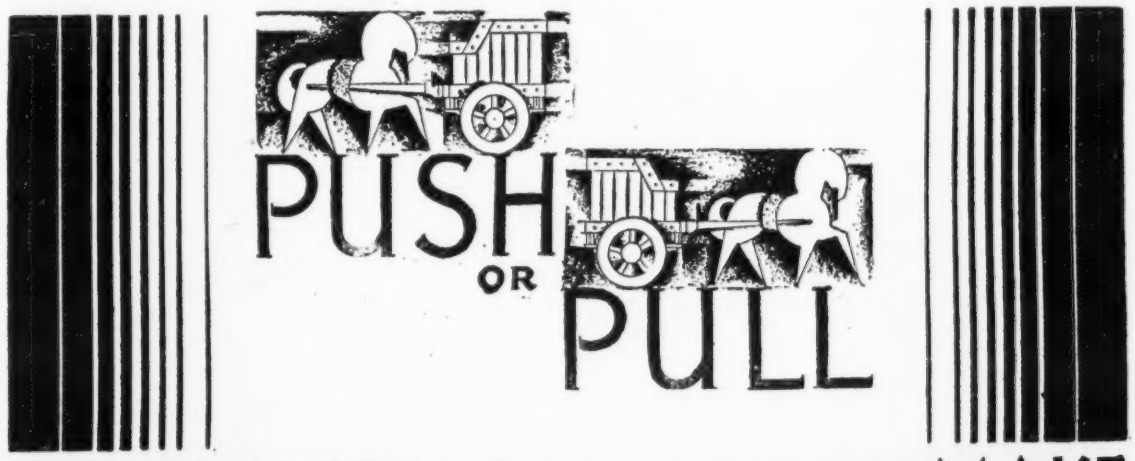
"We are well prepared to take advantage of increased demand, as our inventories and our dealers' inventories are considerably lower than they were at this time last year."

CHICAGO YELLOW CAB

The Chicago Yellow Cab Company reports for the quarter ended June 30, 1930, net profit of $420,476 after depreciation, Federal taxes, etc., equivalent to $1.05 a share on 400,000 no-par shares of stock. This compares with $532,379, or $1.33 a share in preceding quarter and $532,672, or $1.33 a share in the June quarter of 1929.

Net profit for the first six months of 1930 totaled $952,855 after above charges, equal to $2.38 a share, comparing with $1,196,791 or $2.99 a share in first half of previous year.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS



The DEALERS who are going to MAKE MONEY from now on are the ones who have cars with the BIG NEW IDEA to Sell

Dealers who sold the NEW IDEAS in Motor Cars ALWAYS BANKED PROFITS

✓ SELF-STARTER
✓ BALLOON TIRES
✓ FOUR-WHEEL BRAKES
Now ✓✓ FRONT-WHEEL DRIVE

The story of the automobile industry is the story of car dealers—inseparably linked. Factories who were the *first to bring out the new ideas* saw their sales and profits increase—and *their dealers made money.*

The dealers who are going to *make money from now on* are the dealers who have cars with *the big idea to sell!* That's why the live ones are lining up with Ruxton today. For Ruxton is America's First Front Wheel Drive Motor Car! The car with 9 outstanding sales features.

The big demand for front wheel drive cars is coming fast! The trade-in problem will not bother Ruxton dealers—let us tell you why. Check the coupon below and mail it today.

THE RUXTON CORPORATION, ST. LOUIS, MO.

RUXTON

America's First Front Wheel Drive Motor Car

SALES MANAGER, The Ruxton Corporation, St. Louis, Mo.
Send me, without obligation, the whole Ruxton story on the Big New Idea in Motor Cars!
Name.....
Address.....
City..... State.....
Make now handling.....

Louisville Used Car Sales Hold Up Well in July

Louisville, Ky., Aug. 20.—Used car sales in Louisville in July held up very well, with a total of 792 cars sold, as against 865 in June, but values dropped from $247.58 per car to $224.86 per car in the sales made.

Stocks of used cars during the month were reduced from 1,264 to 1,146, or the lowest figure since last fall, and this looks particularly good, in view of the fact that for more than five months stocks were at more than 1,400 cars; in fact, over 1,500 cars for the first four months of this year.

Value of used cars in dealers' stocks advanced to $284.73 in July, the highest figure since January, when the value was given at $293.98.

Used car sales in July averaged lower than at any period since January, 1929, when the average was $223.67, due to a general house cleaning at that time.

Indications are that used cars will continue low due to the number available at low figures, other than those listed in the dealer association stocks; and the fact that trading is being done at low figures comparatively.

The Louisville Automobile Dealers' Association in its report of August 11, shows total used car sales for seven months at 5,721 cars, as against 5,268 used cars sold in the same period of last year, a gain of 453 used car sales, which is very good considering the drop in new car sales this season.

The figures read:

Stock—Used Automobiles

1929 Month	No. of Cars	Average
January	1,114	$,274.75
February	1,131	285.86
March	1,166	300.37
April	1,166	308.76
May	1,081	321.96
June	1,073	333.47
July	1,101	319.09
August	1,131	313.24
September	1,077	319.48
October	1,105	335.57
November	1,252	319.02
December	1,476	298.45

1930 Month	No. of Cars	Average
January	1,527	$293.98
February	1,544	282,08
March	1,527	272.16
April	1,506	260.57
May	1,372	273.88
June	1,264	278.89
July	1,146	284.73

Sales—Used Automobiles

1929 Month	No. of Cars	Average
January	463	$223.67
February	469	264.24
March	738	271.06
April	888	261.98
May	971	269.84
June	895	258.67
July	844	256.23
August	884	253.38
September	757	244.12
October	637	248.61
November	506	270.11
December	521	285.06

1930 Month	No. of Cars	Average
January	535	$235.06
February	680	243.82
March	932	253.24
April	1,002	258.30
May	975	253.27
June	805	247.58
July	792	224.86

NEW AUSTIN SHOWROOMS

Portland, Ore., Aug. 20.—New sales and service headquarters for the Paxon Motor Company, Austin distributor, will be at 442 Burnside St. The firm is now located at 463 Burnside. The new quarters provide ample display room, and storage and service facilities.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

CURRENT PRICES OF PASSENGER CAR MODELS

AUBURN—6-85. 120 W. B.

Sport Sedan	995	Sedan	1,095
Cabriolet	1,095		

AUBURN—8-95. 125 W. B.

Sport Sedan	1,195	Cabriolet	1,295
Sedan	1,295	Phaeton Sedan	1,395

AUBURN—8-125. 130 W. B.

Sport Sedan	1,495	Cabriolet	1,595
Sedan	1,595	Phaeton Sedan	1,695

AUSTIN—4-cyl. 75 W. B.

2 Coupe	445	2 Roadster	445

BLACKHAWK—6 or 8 cyl. 127½ W. B.

5 Coupe	1,995	4 Speedster	2,535
8 Sedan	2,395	7 Cab. Coupe	2,595
2 Coupe	2,395	4 Speed. (T.C.)	2,735
2 Speedster	2,535		

BUICK—8-cyl. 114 W. B.

2 Bus. Coupe	$1,025	5 Phaeton	1,055
5 2-dr. Sedan	1,035	2 Spt. Coupe	1,055
4 Spt. Roadster	1,055	5 4-dr. Sedan	1,095

BUICK—8-cyl. 118 W. B.

2 Bus. Coupe	1,285	5 Phaeton	1,335
2 Spt. Coupe	1,325	4 Spt. Roadster	1,335
		5 4 dr. Sedan	1,355

BUICK—8 cyl. 124 W. B.

4 Coupe	1,535	5 4-dr. Sedan	1,565

BUICK—8 cyl. 132 W. B.

4 Spt. Roadster	1,610	5 4-dr. Sedan	1,785
7 Touring	1,620	7 4-dr. Sedan	1,935
2 Spt. Coupe	1,720	7 Lim. Sedan	2,035
5 Coupe	1,765		

CADILLAS—8-cyl. *210. Fisher Custom

2 Coupe	3,295	5 Sedan	3,695
5 Town Sedan	3,495	7 Sedan	3,795
2 Con. Coupe	3,595	7 Imp. Sedan	3,995
5 Coupe	3,595		

CADILLAC—8-cyl. *210. Fleetwood Custom

2 Roadster	3,450	5 Sedanette	4,595
5 Sedan	4,195	7 Imperial	4,595
5 Sedan Cabrio.	4,245	5 A. W. Phaeton.	4,700
7 Sedan	4,295	Town Cabriolet.	4,995
5 Imperial	4,395	Town Cabriolet.	5,145
5 Imp. Cabrio.	4,445	Lim. Brougham.	5,145
5 Sedanette Cabriolet	4,500		

CADILLAC—V-16. 148 W. B. Fleetwood Custom

2 Roadster	5,350	Town Cabriolet	
2 Coupe	5,800	(Leather)	7,150
2 Con. Coupe	5,900	Lim. Brougham.	7,150
5 Club Sedan	5,950	7 Sedan	7,225
5 Sedan	5,950	5 Imperial	7,300
5 Sedan Cabrio.	6,125	5 Imp. Cabriolet.	7,350
5 Phaeton	6,150	A. W. Phaeton.	7,350
7 Sedan	6,225	7 Imp. Sedan	7,525
5 Imperial	6,300	Town Cabriolet	
5 Imp. Cabrio.	6,350	(Opera seats)	8,750
7 Imp. Sedan	6,525	Town Cabriolet	
A. W. Phaeton.	6,650	(quarter windows)	8,750
2 Coupe	6,850	Town Cabriolet	
2 Con. Coupe	6,900	(leather quarters)	8,750
5 Club Sedan	6,950		
5 Sedan	6,950		
Town Cabriolet.	7,000	Lim. Brougham.	8,750
5 Sedan Cabrio.	7,125	Town Brougham.	9,200
Town Cabriolet.	7,150	Town Brougham.	9,700

CHEVROLET—6-cyl. 107 W. B.

Sport Roadster	515	Coupe	565
Roadster	495	Sport Coupe	625
Phaeton	495	Club Sedan	625
Coach	565	Sedan	675
		Special Sedan	685

CHRYSLER—"6." 6-cyl. *160¼

Business Coupe	795	Touring	835
Royal Coupe (R. S.)	835	4-dr. Sedan Con. Coupe	845
Roadster (RS)	835	(R. S.)	925

CHRYSLER—66. 6-cyl. *163¼

2 Business Coupe	995	Roadster (RS)	1,025
5 Brougham	995	Royal Coupe (RS)	1,075
5 Phaeton	1,025	Royal Sedan	1,095

CHRYSLER—70. 6-cyl. *163½

5 Phaeton	1,295	Royal Coupe (RS)	1,295
2-4 R'dster (RS)	1,345	Royal Sedan	1,295
2 Busin. Coupe	1,245	Con. Coupe (RS)	1,545
5 Brougham	1,245		

CHRYSLER—8-cyl. *186.

2-4 Roadster	1,495	5 Royal Sedan	
2-4 Royal Coupe (Standard)	1,495	(Special) Sport Roadster	1,565
5 Royal Sedan (Standard)	1,525	(6 wire whls) 2-4 Con. Coupe	1,595 1,665
2-4 Royal Coupe (Special)	1,535		

CORD—8-cyl. 137½ W. B.

Sedan	3,095	Cabriolet	3,295
Brougham	3,095	Phaeton Sedan	3,295

DE SOTO—6-cyl. *168¼

Roadster	810	Coupe (R. S.)	860
Bus. Coupe	830	4-dr Sedan	875
Phaeton	830	Convertible Coupe	945

DE SOTO—8-cyl. *177

Business Coupe	965	Touring	1,035
Roadster	985	De Luxe Sedan	1,065
Standard Sedan	995	Con Coupe (RS)	1,075
De Luxe Coupe	1,025		

DODGE—Six. *168¾

Business Coupe	835	4-dr. Sedan	865
Stn. Coupe (RS)	855	Phaeton	875
Roadster	855	Cn. Coupe (RS)	935

DODGE—Eight. *176¾

Roadster (RS)	1,095	Stan. Cp. (RS)	1,125
Cn. Coupe (RS)	1,195	Sedan	1,145

DURANT—"40." 4-cyl. 107 W. B.

Coupe	595	4-dr. Sedan	695
Spt. Roadr (RS)	595		

DURANT—"60." 6-cyl. 109 W. B.

Spt. Road'r (RS)	625	4-dr. Sedan	750
Coupe	685		

DURANT—"65." 6-cyl. 112 W. B. (Three Speed Transmission)

Coupe	845	Phaeton	925
4-dr. Sedan	895		

DURANT—"66." 6-cyl. 112 W. B. (Four Speed Transmission)

Coupe (RS)	945	Phaeton	1,025
4-dr. Sedan	995		

DURANT—"70." 6-cyl. 119 W. B. (Four Speed Transmission)

Coupe (R. S.)	1,195	4-dr. Sedan	1,285

DURANT—6-14. 6-cyl. (Three Speed Transmission)

4-dr. Coach	725	*De L. Roadster	935
Business Coupe	785	*De L. Coupe	945
Stan. Coupe (RS)	815	*De L. Phaeton	960
Stan. Sedan	845	*De L. Sedan	975

*Six wire wheels.

DURANT—6-17. 6-cyl. (Four Speed Transmission)

Business Coupe	995	*De L. Coupe	1,155
Stan. Coupe (R. S.)	1,025	*De L. Roadster	1,155
Stan. Sedan	1,065	*De L. Phaeton	1,185
		*De L. Sedan	1,195

*Six wire wheels.

ELCAR—75-A. 6-cyl. 117 W. B.

2 Roadster	995	4 Con. Landau	1,265
4 Roadster	1,245	5 Club Sedan	1,295
2 Coupe	1,245	5 Sedan	1,295
4 Coupe	1,265		

ELCAR—95. 8-cyl. 123 W. B.

2 Roadster	1,395	4 Con. Landau	1,565
4 Roadster	1,535	5 Club Sedan	1,595
2 Coupe	1,545	5 Sedan	1,595
4 Coupe	1,565		

ELCAR—96. 8-cyl. 123 W. B.

4 Roadster	1,635	5 Club Sedan	1,695
2 Coupe	1,645	4 Fleetwing Sed.	1,695
4 Con. Landau	1,665	5 Princess Sed.	1,695
4 Coupe	1,665		

ELCAR—130. 8-cyl. 130 W. B.

2 Coupe	1,945	4 Con. Landau	1,995
5 Sedan	1,995	4 Roadster	1,995
5 Club Sedan	1,995	5 Touring	1,995
4 Coupe	1,995	7 Sedan	2,120

ELCAR—120. 8-cyl. 127 W. B.

5 Touring	2,465	7 Sedan	2,645
5 Sedan	2,465		

ELCAR—140. 8-cyl. 135 W. B.

4 Roadster	2,645	5 Sedan	2,645
4 Con. Landau	2,645	5 Con. Sedan	2,750

ESSEX—6-cyl. 113 W. B.

2 Coupe	650	Sun Sedan	695
Coach	650	Standard Sedan	715
Coupe (RS)	685	Touring Sedan	775
Roadster	695	Brougham	795

FORD—Model A. 4-cyl. 103½ W. B.

Pickup Op. Cab	425	Standard Sedan	
Roadster	435	(3 win.)	600
Phaeton	440	De Luxe Phaeton	625
Pickup Cl. Cab	455	Cabriolet	625
Tudor Sedan	495	4-dr. De Luxe	
Coupe	495	Sedan (2 win.)	640
Sport Coupe	545	Town Sedan	660
De Luxe Coupe	545	Town Car	1,200

FRANKLIN—Series 145. 125 W. B.

Sedan	2,395	Vic. Brougham	2,695
Coupe	2,610	Con. Coupe	2,710
De Luxe Sedan	2,670	Town Sedan	2,725
Club Sedan	2,675	Pursuit	2,750

FRANKLIN—Series 147. 132 W. B.

Salon Special	2,715	Limousine	3,070
7 Sedan	2,875	Sedan Lim.	3,125
Roadster	2,885	Speedster (5 wire	
5 Pirate Tour	2,885	wheels)	3,425
7 Pirate Phaet.	2,970		

FRANKLIN—Custom. 132 W. B.

*Dietrich Con. Speedster	3,725	Holbrook-Avion Sedan	6,300
*Deuville Sed.	5,100	*Locke Con Sed.	7,600
Dietrich Town Car (wood wheels)	5,200	*Dietrich Pirate Coupe	8,300
Derham Cabriol.	6,100		

*Wire wheels.

GARDNER—Model 150. 130 W. B.

Sport Sedan	1,945	Coupe	1,995
Brougham	1,995	Sedan	2,045
Roadster	1,995		

GARDNER—Model 140. 125 W. B.

Sport Sedan	1,595	Brougham	1,645
Coupe	1,645	Sedan	1,695
Roadster	1,645		

GARDNER—Model 136. 122 W. B.

Sport Sedan	1,195	Brougham	1,245
Coupe	1,245	Roadster	1,245

GRAHAM—6-cyl. Standard. 115 W. B.

2 Coupe	845	2 De Luxe Coupe	
5 Town Sedan	845	(RS)	945
2 Coupe (RS)	895	5 De L. Sedan	995
2 De L. Coupe	895	2 Roadster (RS)	985
5 Univ. Sedan	895	5 Phaeton	1,015
		2 Cabriolet (RS)	1,065

GRAHAM—6-cyl. Special. 115 W. B.

2 Coupe	1,195	5 Sedan	1,225
2 Coupe (RS)	1,225		

GRAHAM—8-cyl. Standard. 122 W. B.

2 Coupe (RS)	1,445	7 Sedan (134)	
5 Sedan	1,445	W. B.)	1,745
		5 Conv. Sedan	1,985

GRAHAM—8-cyl. Special. 122 W. B.

3 Coupe (RS)	1,595	7 Sedan (124	
5 Sedan	1,595	W. B.)	1,845
		5 Conv. Sedan	2,085

GRAHAM—8-cyl. 127 W. B.

5 Sedan	2,025	2 Roadster (RS)	2,225
4 Coupe	2,025	2 Cabroilet (RS)	2,345
2 Coupe (RS)	2,225	5 Phaeton	2,295

GRAHAM—8-cyl. 137 W. B.

7 Phaeton	2,295	7 LeBaron Limo.	
5 Sedan	2,455	Sedan	3,940
5 Town Sedan	2,455	7 LeB. Twn Car.	4,255
7 Sedan	2,525	7 LeB. Lim'sine.	4,505
7 Limousine	2,595		

HUDSON—8-cyl. 119 W. B.

Coupe	885	Stand. Sedan	1,025
Coach	895	Sun Sedan	1,045
Coupe (RS)	925	5 Phaeton	1,300
Roadster	995		

HUDSON—8-cyl. 126 W. B.

Touring Sedan	1,145	7 Sedan	1,295
Brougham	1,195	7 Phaeton	1,500

HUPMOBILE—Century 6. 6-cyl.

2 Com. Coupe	1,145	4 Cabriolet	1,250
5 4-dr. Sedan	1,195	5 Phaeton	1,250
4 Coupe (RS)	1,195	4 Roadster	1,275

HUPMOBILE—Century 8. 8-cyl.

2 Com. Coupe	1,345	4 Con. Cabriolet	1,450
4 Coupe (RS)	1,395	5 Phaeton	1,450
5 Sedan	1,395	4 Roadster	1,475

HUPMOBILE—Series C. Standard

5 4-dr. Sedan	1,695	7 Phaeton (5 disc	
4 Coupe (RS)	1,695	wheels)	1,785
5 Vic. Coupe	1,715	5 Town Sedan (5	
4 Cabriolet	1,770	disc wheels)	1,805

HUPMOBILE—Series R. Standard Models.

5 4-door Sedan	2,080	7 Phaeton (5 disc	
4 Coupe (RS)	2,080	wheels)	2,190
5 Vic. Coupe	2,100	5 Town Sedan (5	
4 Cabriolet (RS)	2,155	disc wheels)	2,190

HUPMOBILE—Series U.

7 Sedan	2,495	7 Limousine	2,645

JORDAN—Standard 80. 120 W. B.

5 Sedan	1,795	Coupe	1,795

JORDAN—Great 90. 8-cyl. 125 W. B.

5 Sedan	2,295	Playboy Road-	
Coupe (Stand.)	2,295	ster	2,595
Coupe (convt.)	2,495	Speedboy Sport	
Sport Sedan	2,595	Phaeton	2,795

JORDAN—Great 90. 8-cyl. 131 W. B.

7 Touring	2,495	7 Sedan Limou-	
7 Sedan	2,595	sine	2,695

LA SALLE—8-cyl. *201. Fisher Custom Fisher Custom

2 Coupe	2,490	5 Town Sedan	2,590
5 Sedan	2,565	7 Sedn	2,775
2 Con. Coupe	2,590	7 Imp. Sedan	2,925
5 Coupe	2,590		

LA SALLE—8-cyl. *201. Fleetwood Custom

5 Phaeton	2,385	5 Sedan Cabrio.	3,725
2 Roadster	2,450	5 Sedanette	3,825
7 Touring	2,525	5 Phaeton	3,995

LINCOLN—8-cyl. 136 W. B.

7 Spt. Touring	4,200	Town Sedan (2	
4 Spt. Phaeton	4,200	windows)	4,400
4 Spt. Phaet. (tonneau cowl and windshield)	4,400	Town Sedan (3 windows)	4,400
2 Club Roadstr.	4,400	5 Sedan	4,500
5 Coupe	4,400	7 Sedan	4,700
		7 Limousine	4,900

LINCOLN—8-cyl. Custom. 136 W. B.

2 Coupe (Judkins)	5,000	7 Cabriolet (N. C. A. W.) by Le	
4 Coupe Sedan (Le Baron)	5,300	Baron	6,900
Berline (2 win.) (Judkins)	5,600	7 Brougham (A. W.) Brunn	7,000
Berline (3 win.) (Judkins)	5,600	7 Cabriolet (S. C. A. W.) Le Baron	7,100
7 Limousine (Willoughby	5,900	7 Cabriolet (A. W. non or semi-col.) Brunn	7,200
4 Con. Coupe (Dietrich)	6,200	7 Cabriolet (fully collapsible) by	
4 Con. Sedan (Dietrich)	6,600	Le Baron	7,200

MARMON—Roosevelt. 8-cyl. *172.

2 Coupe (RS)	950	2 Convertible	
5 Sedan	995	Coupe (RS)	995
4 Vic. Coupe	995		

MARMON—8-69. *180

2 Coupe (RS)	1,495	5 Phaeton	1,610
5 Sedan	1,520	2 Convertible	
5 4-dr. Brough.	1,565	Coupe (RS)	1,610
5 4-dr. Clb Sed.	1,565		

MARMON—8-79. *191

2 Coupe (RS)	1,995	5 4-dr. Club Sed.	2,070
5 Sedan	2,020	2 Convertible	
5 Phaeton	2,020	Coupe (RS)	2,120
5 4-dr. Brougham	2,070		

MARMON—Big Eight. *202

5 Sedan	2,720	7 Sedan	2,920
5 4-dr. Broug.	2,770	7 Sedan Lim.	3,120
5 4-dr. Clb Sed.	2,770	7 Touring	3,170
2 Coupe (RS)	2,850		

De luxe equipment can be had on the Marmon at a moderate additional cost.

NASH—Single Six. 114¼ W. B.

5 2-door Sedan	935	5 4-door Sedan	1,005
2 Coupe	940	4 Cabriolet	1,005
4 Roadster	975	5 De L. Sedan	1,095
4 Coupe (RS)	985	Folding Landau	1,155
5 Touring	995		

NASH—Twin Ignition Six. 118 W. B.

5 2-door Sedan	1,325	4 Coupe (RS)	1,395
2 Coupe	1,345	4 Victoria	1,410
4 Roadster	1,365	5 4-dr. Sedan	1,415
4 Cabriolet	1,385		

NASH—Twin Ignition Six. 128¼ W. B.

7 Touring	1,475	7 Sedan	1,745
5 Touring (Tonneau cowl)	1,595	7 Limousine	1,920

NASH—Twin Ignition Eight. 124 W. B.

5 2-dr. Sedan	1,675	5 4-dr. Sedan	1,795

NASH—Twin Ignition Eight. 133 W. B.

7 Touring	1,845	2-4 Coupe	1,975
2-4 Cabriolet	1,875	5 Victoria	2,045
2 Coupe	1,915	5 Ambassador	2,005
5 Touring (Tonneau Cowl)	1,975	7 Sedan	2,195
		7 Limousine	2,385

(Recent price changes in bold face)

OAKLAND—8-cyl. 117 W. B.

Roadster	895	4-dr. Sedan	995
Coupe	895	Custom Sedan	1,045
5 2-dr. Sedan	895	5 Phaeton	1,075
Sport Coupe	965		

OLDSMOBILE—6-cyl. Standard. 113½ W.B.

2-door Sedan	895	4-door Sedan	995
Coupe	895	Con. Roadster	995
Sport Coupe	965	Pat. Sedan	1,060
Phaeton	965		

OLDSMOBILE—6-cyl. Special. 113½ W. B.

2-door Sedan	970	4-door Sedan	1,070
Coupe	970	Con. Roadster	1,070
Sport Coupe	1,040	Pat. Sedan	1,135
Phaeton	1,040		

OLDSMOBILE—6-cyl. De Luxe. 113½ W.B.

2-door Sedan	1,025	4-door Sedan	1,125
Coupe	1,025	Con. Roadster	1,125
Sport Coupe	1,095	Pat. Selan	1,190
Phaeton	1,095		

OLDSMOBILE—6-cyl. 113½ W. B. (5 Wire Wheel Equipment)

2-door Sedan	950	4-door Sedan	1,050
Coupe	950	Con. Roadster	1,050
Sport Coupe	1,020	Pat. Sedan	1,115
Phaeton	1,020		

PACKARD—736. Standard 8. 127½ W. B.

5 Sedan	2,085		

PACKARD—733. Standard 8. 134½ W. B.

2 Runabout	2,025	5 Coupe	2,275
4 Phaeton	2,025	5 Club Sedan	2,275
7 Touring	2,125	4 Spt. Phaeton.	2,325
2 Coupe	2,125	7 Sedan	2,385
2 Con. Coupe	2,150	7 Sedan Limo	2,485

PACKARD—740. Custom 8. 140½ W. B.

4 Phaeton	3,190	5 Sedan	3,585
2-4 Roadster	3,190	5 Coupe	3,650
2-4 Coupe	3,295	5 Club Sedan	3,750
7 Touring	3,325	7 Sedan	3,785
2-4 Con. Coupe	3,350	7 Sedan Limo	3,885
4 Spt. Phaeton.	3,490		

PACKARD—745. De Luxe 8. 145½ W. B.

7 Touring	4,585	5 Sedan	4,985
4 Phaeton	4,585	5 Coupe	5,100
2-4 Roadster	4,585	5 Club Sedan	5,150
2-4 Coupe	4,785	7 Sedan	5,185
2-4 Con. Coupe	4,885	7 Sedan Limo	5,350
4 Spt. Phaeton.	4,885		

PACKARD—Speedster. 134 W. B.

4 Phaeton	5,200	4 Victoria	6,000
4 Runabout	5,200	5 Sedan	6,000

PACKARD—Individual Custom. 145½ W.B.

2 4-dr. Conv. Coupe (Derham)	6,334	6 Spt. Cabriolet (Brewster)	7,154
4 Conv. Victoria (Dietrich)	6,414	6 Spt. Limousine (Brewster)	7,159
4 Conv. Victoria (Waterhouse)	6,514	6 Spt. Sedan Limo. (Brewster)	7,334
4 Conv. Sedan (Dietrich)	6,694	7 Laudaulet (Le Baron)	7,339
6 Cabriolet (Le Baron)	6,784	6 Spt. Landaulet (Brewster)	7,494
6 Sedan Limo. (Le Baron)	6,859	6 Spt. Cabriolet (Le Baron)	9,174
4 Conv. Sedan (Brewster)	6,904	7 Cabriolet (Rollston)	9,849
6 Sedan Limo. (Le Baron)	6,954	6 Cabriolet (Rollston)	9,984
7 Cabriolet (Le Baron)	6,954	7 Cabriolet (Rollston)	10,049
6 Landaulet (Le Baron)	7,889		

PEERLESS—6-cyl. "61." 116 W. B.

2 Roadster	995	4 Victoria	1,145
2 Coupe	1,095	5 Sedan	1,195

PEERLESS—Standard 8. 118 W. B.

5 Sedan	1,495	5 Brougham	1,545
2 Coupe (RS)	1,495	2 Cabriolet (RS)	1,595
5 Club Sedan	1,545		

PEERLESS—Master 8. 125 W. B.

5 Sedan	1,995	5 Brougham	2,045
2 Coupe (RS)	1,995	2 Cabriolet	2,095
5 Club Sedan	2,045		

PEERLESS—Custom 8. 138 W. B.

2 Coupe (RS)	2,795	5 Brougham	2,845
5 Sedan	2,795	7 Sedan	2,945
5 Club Sedan	2,845	7 Limousine	3,145

PIERCE-ARROW—Group A. 8-cyl. 144 W.B.

7 Tourer	3,975	En. Dr. Lim.	4,685
Con. Coupe	3,975	A.W. Town Car.	6,250
7 Sedan	4,485		

PIERCE-ARROW—Group B. 8-cyl. 134 W.B.

Roadster	3,125	Con. Coupe	3,350
Touring	3,125	4 Spt. Phaeton.	3,425

PIERCE-ARROW—Group B. 8-cyl. 139 W.B.

Vic. Coupe	3,475	7 Sedan	3,625
5 Sedan	3,495	Club Berline	3,695
Club Sedan	3,495	En. Dr. Lim.	3,825

PIERCE-ARROW—Group C. 8-cyl. 132 W.B.

Club Brougham	2,695	5 Sedan	2,875
Coupe	2,865		

PLYMOUTH—4-cyl. *167

Roadster	535	5 Phaeton	625
5 2-dr. Sedan	565	2-4 Coupe (RS)	625
2 Stand. Coupe	565	5 4-dr. Sedan	625
2-4 Spt. Roadster (RS)	610	2-4 Con. Coupe	695

PONTIAC—6-cyl. 110 W. B.

Coupe	665	Sport Coupe	725
Roadster	665	Custom Sedan	785
2-dr. Sedan	665	Phaeton	795
4-dr. Sedan	725		

REO—Model 15. 6-cyl. 116 W. B.

Business Coupe	1,175	Spt. Bus. Coupe	1,250
Phaeton	1,195	Spt. Phaeton	1,270
Coupe (RS)	1,195	Spt. Coupe (RS)	1,270
Stand. Sedan	1,295	Sport Sedan	1,370

REO—Model 20, Flying Cloud. 120 W. B.

Stand. Sedan	1,595	Sport Sedan	1,705
Stand. Coupe	1,595	Sport Coupe	1,705

REO—Model 25, Flying Cloud. 124 W. B.

Stand. Sedan	1,795	Sport Sedan	1,905

STUDEBAKER—Six. 6-cyl. 114 W. B.

Roadster	795	Sedan	895
Club Sedan	845	Regal Sedan	995
2 Coupe	845	Landau Sedan	995
Tourer	895	Regal Tourer	995
4 Coupe	895		

STUDEBAKER—Commander 8-70. 124 W.B.

4 Coupe	1,585	5 Brougham	
5 Sedan	1,585	(Cloth)	1,

Rhode Island's July New Car Sales Gain 5.7% Over June

Details of Installment Financing Are Announced

(Continued from Page 1)

merce Department on basis of statistics of 439 automobile financing organizations. These figures compare with total of 384,520 machines and advances of $178,983,835 for June, 1929, and 344,220 cars on which $145,346,014 was advanced during May of this year.

For the first six months of the current year, auto financing aggregated 1,666,578 cars with a dollar volume of $710,753,358, against 1,809,356 and $839,227,143 for the corresponding period of 1929.

Details of automobile financing in 1929 and 1930 are shown in the following tables:

TOTAL CARS

	1930 Number of cars	1930 Volume in dollars	1929 Number of cars	1929 Volume in dollars
January	164,638	$ 72,997,775	155,630	$ 73,166,768
February	197,608	84,756,722	189,183	90,489,411
March	285,418	120,872,894	302,672	141,076,601
April	341,842	144,891,375	378,790	171,931,720
May	*344,220	*145,346,014	398,561	183,580,808
June	332,852	141,888,578	384,520	178,983,835
July	.....	.....	388,747	180,205,492
August	.....	.....	347,144	162,894,966
September	.....	.....	298,286	138,717,971
October	.....	.....	276,292	126,247,679
November	.....	.....	211,805	94,932,292
December	.....	.....	170,399	80,088,696
Total	1,666,578	$710,753,358	3,502,029	$1,622,316,239

NEW CARS

January	78,319	$ 45,026,703	78,288	$ 48,677,337
February	95,199	52,749,661	103,079	61,736,873
March	137,365	76,292,271	165,898	96,639,213
April	169,994	94,464,850	204,949	116,811,926
May	*168,614	* 93,566,638	212,239	125,096,943
June	157,874	89,939,011	203,632	121,852,467
July	.....	.....	211,296	125,005,223
August	.....	.....	183,921	111,664,809
September	.....	.....	158,021	94,240,101
October	.....	.....	132,187	80,745,596
November	.....	.....	97,734	58,596,676
December	.....	.....	74,095	48,846,672
Total	807,166	$450,919,134	1,825,339	$1,089,903,836

USED CARS

January	80,723	$ 25,526,546	68,859	$ 20,734,372
February	95,340	29,095,300	76,480	24,595,774
March	141,611	41,474,040	121,194	37,815,473
April	162,823	48,460,620	154,843	47,248,843
May	*167,296	* 48,487,788	167,567	50,830,658
June	166,560	48,688,483	164,023	50,205,848
July	.....	.....	162,451	49,077,845
August	.....	.....	149,413	45,652,348
September	.....	.....	127,429	39,310,095
October	.....	.....	135,158	41,783,894
November	.....	.....	103,950	32,340,123
December	.....	.....	89,969	28,574,295
Total	814,353	$241,732,777	1,521,336	$ 468,169,568

*Revised.

FORD HAS GAIN OF 571 IN 7 MONTHS

Many Makes Record Increases Over July, 1929

(Continued from Page 1)

pared with the same month a year ago and June of this year, follows:

	July 1930	July 1929	June 1930
Auburn	7	23	8
Austin	1	*	*
Buick	89	84	63
Cadillac	9	16	6
Chevrolet	306	432	332
Chrysler	71	105	70
Cord	1	*	1
De Soto	69	67	66
Dodge	36	67	50
Durant	8	23	10
Essex	34	147	44
Ford	722	579	604
Franklin	6	22	4
Gardner	2	2	...
Graham	22	71	25
Hudson	21	45	15
Hupmobile	21	37	15
La Salle	12	31	8
Lincoln	2	5	2
Marm'n-Roosevelt	4	22	2
Marquette	2	18	8
Nash	35	83	44
Oakland	11	9	17
Oldsmobile	19	66	22
Packard	32	33	30
Peerless	6	11	12
Pierce-Arrow	12	14	9
Plymouth	43	67	49
Pontiac	46	121	51
Reo	13	32	17
Studebaker	35	51	27
Viking	...	5	...
Whippet	4	62	3
Willys	18	*	19
Willys-Knight	16	39	15
Miscellaneous	2	19	6
Totals	1,742	2,408	1,648

*Not on market at that time.

The registration for seven months compared with the same period last year, follows:

	1930	1929
Auburn	83	122
Austin	1	*
Buick	552	630
Cadillac	44	85
Chevrolet	2,289	2,659
Chrysler	410	442
Cord	12	*
De Soto	391	420
Dodge	402	566
Durant	56	111
Essex	337	982
Ford	3,980	3,409
Franklin	41	121
Gardner	4	7
Graham	130	421
Hudson	146	244
Hupmobile	111	181
Jordan	3	9
La Salle	75	180
Lincoln	20	29
Marmon-Roosevelt	18	98
Marquette	65	33
Nash	216	527
Oakland	117	100
Oldsmobile	189	316
Packard	154	227
Peerless	53	83
Pierce-Arrow	67	85
Plymouth	268	369
Pontiac	402	825
Reo	160	255
Studebaker	189	374
Viking	1	13
Whippet	30	545
Willys	175	*
Willys-Knight	113	226
Miscellaneous	8	111
Totals	11,257	14,890

*Not on market at that time.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Ford and Chevrolet Sales In Seattle Are Holding Own

SEATTLE, Wash., Aug. 20—Official new car sales figures for Ford, Chevrolet and Austin for the week August 9 to 15 inclusive, compiled from the records by the Motor List Company, follow: Ford, 75; Chevrolet, 27, Austin, 4.

The biggest drop was in Ford sales, with Chevrolet holding its own, and Austin enjoying its best week to date. Several concerns have bought the Austin for delivery work, that serving somewhat in the nature of an attractive advertisement, as well as a utility purpose.

Wm. Ryan of C. H. Wells, Inc., leading Chevrolet dealer in King county, is now used car manager for this firm, in addition to being assistant to Manager C. H. Wells.

"The past week was good, both in new car and used car business," said Ryan to Automotive Daily News. "In view of prospective sales that look very favorable, our firm looks for August to be 50% better than July."

With the new standard wheelbase, dual tire truck on display, there is renewed interest in Chevrolet trucks, he stated. A stunt now being put over is displaying truck jobs just sold to some leading fleet operator, in the corner show window of the dealership, at Pike and Broadway. Last week a truck sold to Standard Brands was shown, together with the varied products of this big concern.

This week a sedan, in attractive special colors, for Hormel Packing Company is being displayed. This firm has purchased two cars locally, with top white and balance of body in greens.

"We find this good advertising," continued Ryan. "It is our policy so to display trucks or cars sold to some concern that uses a fleet and has a special color or other distinctive feature placed on the vehicle."

Sales Manager Gibbons of William O. McKay Company, leading Ford dealer, reports last week very good, but nothing spectacular. A sales contest is now under way with the firm that is stimulating sales and all indications are for good business the balance of the month.

Other dealers appear to be doing fair business considering the midsummer season.

MID-HUDSON BRIDGE TO OPEN ON AUG. 25

Poughkeepsie, N. Y., Aug. 20.—The new Mid-Hudson Bridge, the second great vehicular span to link the east and west shores of the Hudson between New York and Albany, will be formally opened on Monday, August 25. The opening will be marked by brief ceremonies at the eastern end of the bridge in Poughkeepsie between 4 and 5 o'clock in the afternoon. Gov. Franklin D. Roosevelt and former Gov. Alfred E. Smith will speak.

The opening of the bridge, which was started on May 10, 1925, marks the successful completion of one of the largest and most difficult single engineering projects ever undertaken by the state of New York.

The new structure, situated about a quarter of a mile below the old railway bridge at Poughkeepsie, has been erected at a cost of approximately $5,800,000. It was designed by Ralph Modjeski and Daniel E. Moran, internationally famous bridge engineers.

ATLANTA, GA., FORD SALES INCREASING

Atlanta, Ga., Aug. 20 (UTPS).—Mid-August finds some improvement in Ford sales, with dealers reporting a general increase of between 5 and 10 per cent. over sales for the first fifteen days of last month, with a demand for all classes of cars.

Repair business has shown a decided improvement over July, dealers state, although some of them have encountered a lull in this business during the past few days. It is not expected that the drop-off will last long, however, and in the meantime dealers are much encouraged over the showing made by their repair departments for the first half of the month.

Like many other sections of the country, Atlanta is suffering from drought, which, if not relieved, will seriously affect the rural district markets, including both the sale of new and used cars, and automobile men are praying for rain almost as hard as are the farmers.

If August continues as it has started, however, it will show a definite improvement over July, and give encouragement for dealers of the city.

A. G. BATES JOINS FORD DEALER IN PORTLAND, ORE.

Portland, Ore., Aug. 20.—A. G. (Bert) Bates has been appointed used-car manager for Talbot & Casey, Inc., Ford dealers. He has been with the Oregon Hupmobile Company, in charge of the wholesale department, and, prior to that, with the Pacific Finance Company.

AJAX PLANT SETS NEW RECORD FOR PRODUCTION

Charlotte, N. C., Aug. 20.—Production at the McClaren plant here of the Ajax Rubber Company now has ben pushed up to 1,500 tires daily, a heretofore unequaled total, it was announced here.

The plant is being operated day and night at full capacity. The new machinery recently installed at this plant having been shipped here from the Racine, Wis., plant now is in operation. The payrol' for employees for the manufacturing department is now approximately $9,500 weekly, a figure not previously equaled by this plant.

FORMS SECURITY FIRM

Spokane, Wash., Aug. 20.—M. O. Hatch, president of Hatch Motor Company, Chrysler distributor in the Inland Empire, has organized the Hatch Securities Company. The new firm will handle paper on Chrysler, Plymouth and used car sales. The new company will handle all financing of sales made by the motor firm.

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THE Kelley Kar Company of Los Angeles, California, will purchase for cash a large quantity of new automobiles. Roadsters, Coupes, Sedans.

THE Kelley Kar Company will relieve you of surplus factory, warehouse, or distributor stocks.

THE Kelley Kar Company merchandising method will place these cars in users' hands in such a manner as to reflect advantageously to both manufacturer and dealers. We create additional demand for your products, at the same time stimulating local dealer business.

ANY *manufacturer desiring a fast merchandising outlet for his product can make a valuable connection with the Kelley Kar Company.*

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DEALER DOINGS

North Arlington, N. J., Aug. 20.—Baker Oldsmobile, Inc., to sell and service Oldsmobile automobiles, has been formed in North Arlington by Elbert W. Baker, Elsie Baker, S. Leo Burke and Catherine Burke, North Arlington.

St. Louis, Aug. 20.—Appointment of the Rothe Motor Company, Tenth and State Streets, East St. Louis, as an authorized Graham-Paige dealer is announced by B. F. Ford, general manager of the Gross Motor Company, local distributor. W. F. Rothe, who formerly was a foreman of the Republic iron rolling mills on the East Side, and who has operated a machine shop at the Tenth and State streets location for a number of years, is president of the company. Other officers are: E. F. Arnold, vice-president; H. J. Nickolaus, secretary, and Edwin O. Rothe, service manager.

Utica, N. Y., Aug. 20.—Lafayette Utica Motors, Inc., 417 Lafayette St., will devote its entire attention to the selling of Willys-Knights and Willys automobiles.

Newark, N. J., Aug. 20.—The Morgan Motor Car Company, for many years at 999 Broad Street, is to move shortly to its new headquarters at 23-25 Elizabeth Avenue, which already is open for business. A long lease with purchase option has been obtained. The new Morgan Oldsmobile headquarters was built two years ago for automobile sales and service, and as Broad Street parking difficulties will be overcome by plenty of parking space on side streets within a block, William J. Morgan, president believes customers will not have to wander around in order to be on the safe side.

Louisville, Ky., Aug. 20.—Directors of the Louisville Automobile Dealers Association held a regular meeting on August 13, principally to discuss routine business matters. Open discussion of individuals indicated the general opinion that rural business this fall would be quite dull. Expressed opinions were to the effect that city business would show some improvement this fall.

Irvington, N. J., Aug. 20.—Merz Motor Car Company and Hibbard's Studebaker service are now established in their new quarters, 717-723 Lyons Ave., near Union Avenue, Irvington. The Merz Motor Car Company, of which Paul J. Merz is president and manager, has held the Irvington dealership for nearly five years and was formerly located at 1305 Springfield Ave. Mr. Merz has been connected with Studebaker sales for over eight years. Those associated with Mr. Merz in the new salesroom are Fred P. Parker, veteran Studebaker salesman; Albert Haug, who has been with the Merz organization for four years, and Herbert W. Hahn, formerly of Wegner Motor Company of Belleville, who joined the Merz forces after the dissolution of the Belleville Studebaker dealership.

Des Moines, Ia., Aug. 20. — The Sears Automobile Company, the oldest motor car distributor in Iowa, has been purchased by a new company composed of Hugh I. Harter, Grover C. Hubbell and James W. Hubbell. The name of the concern will be changed to the Harter Motor Company, Inc., and Mr. Harter, who has been president of the Sears Automobile Company, will become president, treasurer and general manager.

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MOTORCYCLES FOR SALE

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The Largest Automotive House in U. S. A.
SIX STERN BROS., 1790 1st Av., N.Y.C. ATWater 3901

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS

MAKE AND MODEL	Weight—5-P. Sedan	Wheel Base	Engine Make	Fan Belt Type	Thermostat Used	Valve Arrangement	Cylinders	Bore and Stroke	Piston Disp.	Compression Ratio	Tax H. P.	Brake, H. P. and Peak R. P. M.	Pist. Make or Material	No. Main Br.	Oil Purifier	Fuel Clean'r	Carburetor	Air Cleaner
Auburn 6-85	3255	120	Lyc	V	Dole	L	6	2⅞x4¾	185	*5.16	19.8	70@3400	*Alum	4	No	No	Sch	No
Auburn 8-95	3510	125	Lyc	V	Dole	L	8	2⅞x4¾	246	*5.15	26.4	95@3300	*Alum	5	Pur	AC	Sch	No
Auburn 125	3908	130	Lyc	V	Dole	L	8	3¼x4½	299	*5.25	33.8	125@3600	*Alum	5	Pur	AC	Sch	No
Austin	§1130	78	Own	F	——	L	4	2.2x3	45.8	5.1	7.8	13@3000	Alum	2	—	—	Til	—
Blackhawk 6	4320	127½	Own	—	Bish-Bab	O	6	3⅜x4½	241.5	5.10	27.3	85@3150	*Alum	7	Wal	AC	Zen	Un
Blackhawk 8	4185	127½	Own	V	Bish-Bab	L	8	3 x4¾	268.5	5.50	28.8	88@3200	*Alum	5	Wal	AC	Zen	AM
Buick 8-50	3170	114	Own	V	Dole	O	8	2⅞x4¼	220.7	4.8	26.45	77@3200	CI	5	AC	—	Mar	AC
Buick 8-60	3795	118	Own	V	Dole	O	8	3⅛x4⅝	272.6	4.63	30.02	90@3000	CI	5	AC	—	Mar	AC
Buick 8-80	4255	124	Own	V	Dole	O	8	3⅜x5	344.8	4.5	35.12	104@2800	CI	5	AC	—	Mar	AC
Buick 8-90	4340	132	Own	V	Dole	O	8	3⅜x5	344.8	4.5	35.12	104@2800	CI	5	AC	—	Mar	AC
Cadillac 353	5055	*210	Own V	V	Yes	LV	8	3⅜x4½	353	5.15	36.5	95@3000	CI	3	AC	Gas	Own	—
Cadillac 452	6100	148	Own	V	Yes	O	16	3 x4	452.0	5.50	57.5	165@3400	CI	5	AC	Gas	Own	None
Chevrolet	2500	107	Own	V	Yes	O	6	3⅛x3¾	194.0	5.01	26.3	46@2600	CI	3	—	AC	Car	AC
Chrysler 6	2745	*169¼	Own	V	Yes	L	6	3⅛x4¼	195.6	5.29	23.44	62@3200	*Alum	4	—	Yes	Car	—
Chrysler 70	3435	*168½	Own	V	Yes	L	6	3⅜x5	268.4	5.00	27.34	93@3200	*Alum	7	Pur	AC	Str	Un
Chrysler 66	2850	*163¼	Own	V	——	L	6	3⅛x4¾	218.6	5.00	23.43	68@3000	Alum	7	Pur	AC	Str	Un
Chrysler 8	——	*186⅛	Own	V	Yes	L	8	3 x4¼	240.3	5.20	28.8	80@3400	*Alum	5	Yes	—	Str	Yes
Chrysler Imp. 8	——	*210¾	Own	V	Yes	L	8	3½x5	384.8	5.01	39.2	125@3200	*Alum	9	Yes	—	Str	Yes
Cord (Fr. Wh. D.)	4530	137½	Lyc	V	——	L	8	3¼x4½	298.6	5.25	33.8	125@3600	*Alum	5	Yes	AC	Sch	—
De Soto 6	2705	*168⅛	Own	V	Yes	L	6	3⅛x4⅛	189.81	5.20	23.44	60@3400	*Alum	4	—	AC	Car	Un
De Soto 8	2965	*177	Own	V	Yes	L	8	2⅞x4	207.7	5.20	26.45	70@3400	*Alum	5	—	AC	Str	Yes
Dodge Six D D	2668	*168⅝	Own	V	Yes	L	6	3⅛x4⅛	189.8	5.20	23.4	60@3400	*Alum	4	No	No	Car	—
Dodge 8	3043	*176⅞	Own	V	Yes	L	8	2⅞x4¼	220.7	5.20	26.45	75@3400	*Alum	5	Pur	No	Str	Un
Durant 6-14	2950	*172¼-176	Con	V	Bish-Bab	L	6	3¼x4	199	5.32	25.4	58@3100	*Alum	4	AC	AC	Str	AC
Durant 6-17	3290	*175¾-179½	Con	V	Bish-Bab	L	6	3⅜x4⅝	248	5.06	27.34	70@3000	*Alum	7	Ac	AC	Str	AC
Elcar 6-75	2942	117	Lyc	V	Yes	L	6	2⅞x4¾	185	5.25	19.8	61@3000	*Alum	4	Pur	Gas	Sch	—
Elcar 140 and 130	3980	135-130	Con	V	Yes	L	8	3⅜x4½	322	5.25	36.45	140@3300	*Alum	5	Pur	Gas	Sch	—
Elcar 8-95-96	3299	123	Lyc	V	Yes	L	8	2⅞x4¾	246.7	5.25	26.5	90@3000	*Alum	5	Pur	Gas	Sch	—
Essex	2805	113	Own	V	——	†L	6	2¾x4½	160.4	5.80	18.15	60@3600	Alum	3	—	Ste	Mar	AC
Ford A	2336	103½	Own	V	——	L	4	3⅞x4¼	200.5	4.22	24.03	40@2200	Alum	3	—	AC	Zen	—
Franklin 145	3930	125	Own	—	Bish-Bab	*O	6	3½x4¾	274	5.30	29.4	95@3000	Alum	7	AC	AC	Str	AC
Franklin 147	4060	132	Own	—	Bish-Bab	*O	6	3½x4¾	274	5.30	29.4	95@3000	Alum	7	AC	AC	Str	AC
Gardner 136	3330	122	Lyc	V	Dole	L	6	2⅞x4¾	185	5.05	19.8	70@3500	*Alum	4	Pur	Gas	Sch	—
Gardner 140	3500	125	Lyc	V	Dole	L	8	2⅞x4¾	246.6	5.15	26.5	90@3300	*Alum	5	Pur	Gas	Sch	AM
Gardner 150	3890	130	Lyc	V	Dole	L	8	3¼x4½	298.6	5.25	33.8	126@3300	*Alum	5	Pur	Gas	Sch	AM
Graham Std. 6	3175	115	Own	F	Dole	L	6	3⅛x4½	207	5.41	23.44	66@3200	Alum	7	No	AC	DL	AC
Graham Spl. 6	3390	115	Own	F	Dole	L	6	3¼x4½	224	5.49	25.35	76@3400	*Alum	7	AC	AC	DL	AC
Graham Std. 8	3795	122	Own	V	Bish-Bab	L	8	3¼x4½	298	5.20	33.80	100@3400	*Alum	5	AC	AC	DL	AC
Graham Spl. 8	3875	122	Own	V	Bish-Bab	L	8	3¼x4½	298	5.20	33.80	100@3400	*Alum	5	AC	AC	DL	AC
Graham Cust. 8	4300	127	Own	F	Bish-Bab	L	8	3⅜x4½	322	5.41	36.45	120@3200	*Alum	5	AC	AC	John	AC
Graham Cust. 8	4405	137	Own	F	Bish-Bab	L	8	3⅜x4½	322	5.41	36.45	120@3200	*Alum	5	AC	AC	John	AC
Hudson Super 8	3200	119-126	Own	V	——	L	8	2¾x4½	213.8	5.80	24.2	80@3600	Alum	5	—	Ste	Mar	AC
Hupmobile Cen. 6	2905	——	Own	V	——	L	6	3¼x4¼	211.6	5.10	25.35	70@3200	Alum	4	—	Ste	Str	—
Hupmobile Cen. 8	3175	——	Own	V	Pines	L	8	2⅞x4⅝	240.2	5.20	26.45	90@3200	Alum	5	—	Ste	Str	—
Hupmobile C	3725	——	Own	V	No	L	8	3 x4¾	268.6	5.20	28.8	100@3200	CI	5	Pur	Gas	Str	Yes
Hupmobile H & U	4000	——	Own	—	No	L	8	3½x4¾	365.6	5.20	39.2	133@3400	Alum	5	Pur	Ste	Str	AM
Jordan St. Line 80	3490	120	Con	V	Pines	L	8	2⅞x4¾	246.7	5.10	26.5	80@3000	*Alum	5	Ste	AC	Str	AC
Jordan G. Ninety 8	3700	125	Con	V	Pines	L	8	3 x4¾	268.6	5.10	28.9	85@3200	*Alum	5	Ste	Ste	Str	AM
La Salle	4645	*201	Own	V	Yes	LV	8	3⅛x4⅛	340	5.18	35.1	90@3000	CI	3	AC	Gas	Own	—
Lincoln	5030	136	Own	V	——	L	8	3½x5	384	4.83	39.2	90@2800	Alum	5	Pur	Own	Str	Un
Marmon-Roosevelt	2833	*172	Own	V	Dole	L	8	2¾x4¼	201.9	5.25	24.2	77@3400	Alum	5	—	—	Str	AC
Marmon Eight 69	3103	*180	Own	V	——	L	8	2⅞x4¼	211.2	5.50	25.4	84@3400	Alum	5	AC	AC	Sch	AC
Marmon Eight 79	4028	*191	Own	V	Pines	L	8	3⅛x4¾	303.2	5.50	32.5	110@3400	Alum	5	AC	AC	Sch	AC
Marmon Big Eight	4363	*202	Own	V	Pines	L	8	3¼x4¾	315.2	5.50	33.8	125@3400	Alum	5	AC	AC	Sch	AC
Nash Single Six	2850	114¼	Own	V	Pines	L	6	3⅛x4⅜	201.3	5.00	23.4	60@2800	*Alum	7	AC	AC	Car	AC
Nash Twin Ig. 6	3535	118-128¼	Own	V	Pines	L	6	3⅜x4½	242	5.00	27.3	74@2800	*Alum	7	AC	AC	Mar	AC
Nash Twin Ig. 8	4000	124-133	Own	V	Pines	L	8	3¼x4½	298.6	5.25	33.8	100@3200	*Alum	9	AC	AC	Mar	AC
Oakland V-8	3095	117	Own	V	Yes	H	8	3⅛x3⅜	251.0	5.00	37.8	85@3000	CI	3	—	AC	Mar	AC
Oldsmobile	2940	113½	Own	V	——	L	6	3⅛x4⅛	197.5	5.20	24.4	62@3000	CI	4	AC	AC	John	AC
Packard 726-733	4255	127½-134½	Own	V	Own	L	8	3⅛x5	320	—	32.5	90@3200	*Alum	9	Pur	Yes	Own	Own
Packard 740-745	4560	140½-145½	Own	V	Own	L	8	3½x5	384.8	—	39.2	106@3200	*Alum	9	Pur	Yes	Own	Own
Peerless St. 8	3642	118	Own	V	Bish-Bab	L	8	2⅞x4¾	246.0	5.00	26.45	85@3200	*Alum	5	Pur	AC	Sch	AC
Peerless Master 8	4521	125	Own	V	Bish-Bab	L	8	3⅜x4½	322	5.00	36.4	115@3200	*Alum	5	Pur	AC	Sch	AC
Peerless Custom 8	4800	138	Own	V	Bish-Bab	L	8	3⅜x4½	322	5.00	36.4	120@3200	*Alum	5	Pur	AC	Sch	AC
Pierce-Arrow	4523	132	Own	V	Yes	L	8	3⅜x4¾	340	5.07	36.45	115@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow	4304	134	Own	V	Yes	L	8	3½x4¾	366	5.07	39.2	125@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow	4713	139	Own	V	Yes	L	8	3½x4¾	366	5.07	39.2	125@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow	4831	144	Own	V	Yes	L	8	3½x5	385	5.07	39.2	132@3000	*Alum	9	Yes	Yes	Str	Un
Plymouth	2595	*167	Own	V	——	L	4	3⅝x4¾	196	4.60	21.03	48@2800	*Alum	3	—	Yes	Car	—
Pontiac	2695	110	Own	V	Var	L	6	3⅛x3⅞	200.0	4.90	26.3	60@3000	S St	3	—	AC	Mar	Yes
Reo 15	3300	115	Con	V	Dole	L	6	3⅜x4	214.7	5.50	27.3	60@2800	*Alum	7	—	—	Sch	Un
Reo 20	3700	120	Own	V	Bish-Bab	L	6	3⅜x5	268.3	5.30	27.3	80@3200	Alum	7	Han	—	Sch	Un
Reo 25	3795	124	Own	V	Bish-Bab	L	6	3⅜x5	268.3	5.30	27.3	80@3200	Alum	7	Han	—	Sch	Un
Ruxton Fr.Wh. Dr.	4000	130	Own	V	Yes	L	8	3 x4¾	268.6	5.09	28.8	100@3400	*Alum	5	Yes	AC	Zen	AM
Studebaker Six	2950	114	Own	V	Dole	L	6	3¼x4	205.3	5.20	25.4	70@3200	CI	4	Han	Ste	Sch	—
Studebaker Dict. 8	3095	115	Own	V	Dole	L	8	3⅛x3¾	221.0	5.00	30.0	72@3200	*Alum	9	Pur	AC	Str	AM
Studebaker Com. 8	3525	124	Own	V	Dole	L	8	3⅛x4¼	250.4	5.20	30.0	101@3200	*Alum	9	Han	Ste	Str	AM
Studebak'r Pres. 80	4230	130	Own	V	Dole	L	8	3½x4⅜	337	5.10	39.2	122@3200	*Alum	9	Han	Ste	Str	AM
Studebaker Pres. 90	*4360	136	Own	V	Dole	L	8	3½x4⅜	337	5.10	39.2	122@3200	*Alum	9	Han	—	Str	AM
Stutz	4918	134½-145	Own	—	Yes	O	8	3⅜x4½	322	5.10	36.5	112@3300	*Alum	9	Wal	Gas	Zen	AM
Viking Eight	3620	125	Own	V	Yes	H	8	3⅜x3⅝	259.5	5.10	36.5	81@3200	CI	3	Own	AC	John	AC
Windsor 6-69	3195	120	Con	V	Dole	L	6	2¾x4¾	185	5.00	19.8	47.5@2600	*Alum	4	AC	—	Str	—
Windsor 6-72	2930	120	Con	V	Dole	L	6	3⅜x4	215	4.94	27.3	66@3200	*Alum	7	AC	—	Str	—
Windsor 6-77	2930	120	Con	V	Dole	L	6	3⅜x4	215	4.94	27.3	66@3200	*Alum	7	AC	—	Str	—
Windsor 8-85	3600	125	Con	V	Dole	L	8	3 x4¾	269	5.00	28.8	85@3100	*Alum	5	AC	Gas	Str	AC
Windsor 8-92	3600	125	Con	V	Dole	L	8	3 x4¾	269	5.00	28.8	85@3100	*Alum	5	AC	Gas	Str	AC
Whippet 96 A	2412	103¼	Own	V	No	L	4	3¼x4¾	145.7	5.40	15.6	40@3200	*Alum	3	No	No	Til	No
Whippet 98 A	2693	112½	Own	V	Dole	L	6	3⅛x3⅞	178.3	5.12	23.4	50@3000	*Alum	7	No	Til	Til	Til
Willys Six 98-B	2641	110	Own	V	Var	L	6	3¼x3⅞	193	5.56	25.3	65@3400	CI	4	No	Til	Til	Til
Willys 8-80	3114	120	Con	V	Var	L	8	3⅛x4	245.4	5.40	31.25	80@3200	CI	5	No	Til	Til	Til
Willys-Knt. 66-B	3934	120	Own	V	Var	K	6	3⅜x4¾	255	5.50	27.3	87@3200	*Alum	7	Ski	Til	Til	Til
Willys-Knight 87	2989	112½-115	Own	V	Var	K	6	2⅞x4⅜	177.9	5.88	20.7	55@3000	*Alum	7	Ski	Til	Til	Til

Weight—*Studebaker 7-pass. sedan. †On Elcar 140 4375 pounds. §Austin Standard 2-passenger coupe.

Wheel Base—*Over all length of chassis instead of wheel base.

Engine Make—Con, Continental; Lyc, Tycoming.

Fan Belt Type—V, V-type; F, flat; C, cone.

Thermostat—Bish-Bab, Bishop & Babcock; Dole, Dole Valve Co., Chicago, Ill.; Pines, Pines Winterfront; Var, Various makes.

Valve Arrangement—L, L head; H, horizontal; O, overhead; K, sleeve valve. LV, V type L head.
*Air cooled. †Thermo Syphon water circulation.

Piston Material—*Alum, aluminum with invar struts; Alum, aluminum alloy; CI, cast iron; S St, semi-steel.

Compression Ratio—*Optional on the Auburn.

Oil Purifier—Pur, Purolator; Wal, Wall; Han, Handy; AC, AC Spark Plug Company; Ski, Skinner; Ste, Stewart-Warner.

Fuel Cleaner—AC, AC Suark Plug Company; Gas, Gascolator; Ste, Stewart-Warner; Til, Tilotson.

Carburetor—Sch, Wheeler Schebler; Zen, Zenith; Mar, Marvet; Car, Carter; Str, Stromberg; DL, Detroit Lubricator; John, Johnson; Til, Tilotson.

Air Cleaner—AC, AC Spark Plug Company; AM, Air Maze; Un, United; Han, Handy; Til, Tilotson.

Front End Drive—Link, Link Belt; Tex, Texolite; Cel, Celeron; Ram, Ramsey; Whit, Whitney Chain; Diam, Diamond Chain; Morse, Morse Chain Co.; Var, Various makes of chains; Var-G, various makes of gears.

Steering Gear—Gem, Gemmer; Ross Gear.

Ignition, Generator and Starter—Aut-L, Auto-Lite; Del-R, Delco-Remy; N E, North East; Dyn, Dyneto.
*Reid's starter drive used.

Clutch—Borg, Borg & Beck; Br-L, Brown-Lipe; Rock, Rockford Machine; Russ, Russell; Long, Long Clutch Co.

Gearset—War G, Warner Gear Company; Detr, Detroit Gear; Mun, Muncie Gear.
*Three or four speed gear sets as shown are available for either model; WC, Warner Corp.

Universals—Un P, Detroit Universal Products Company; Spic, Spicer Mfg. Corporation; MM, Mechanics Universal Joint Company, Rockford, Ill.; Cle, Cleveland; Fab, Fabric.

Rear Axle—Col, Columbia; Sal, Salisbury; Cla, Clark Equipment Company; Tim, Timken.

Steering Gear—Gem, Gemmer; Ross Gear and Tool Company; Sag, Saginaw; Say-B, Saylor-Beall Mfg. Company, Detroit, Mich.; War, Warner.

Brakes—H, hydraulic; M, mechanical; SD, steeldraulic; Bendix, Bendix Brake Corporation. *Bendix front; own rear

Rear Springs—S, semi-eliptic; El, full eliptic; Cant, semi-cantilever.

Spring Shackles—Tryon, Tryon Spring Shackle Company; Rub B, Rubber block; Chain; Faf, Fafnir; O-N, Henry Mfg. Co., Moline, Ill.; Belf, Belfex Corp.

Chassis Lubricator—Alem, Alemite; Al-Z, Alemite Zerk; Alem A, Alemite automatic; Bijur, Bijur chassis lubricator; Cen, central magazine.

Tires—*Packard 733 cars equipped with 20x6.50. Stutz 134½ wheel base has 33x6.50.

OF PRESENT AMERICAN PASSENGER CAR MODELS

Make and Model	Front End Drive	Ignition System	Gen. and Starter	Clutch	Gear Set and Speeds	Universals	Rear Axle	Ratio	Brakes	Steering Gear	Springs Rear	Spring Shackles	Chassis Lubric.	Tires
Auburn 6-85	Link	Del-R	*Del-R	Long	War 3	Un P	Col ½	*4.9	H	Ross	S 56¾	Own	Bijur	18x5.50
Auburn 8-95	Link	Del-R	*Del-R	Long	War 3	Un P	Col ½	*4.7	H	Ross	S 56¾	Own	Bijur	18x6.00
Auburn 125	Link	Del-R	*Del-R	Long	Detr 3	Un P	Col ½	*4.45	H	Ross	S 56¾	Own	Bijur	18x6.50
Austin	Gear	Aut-L	*Aut-L	Rock	War-G 3	Spic	Sal	5.25	Mech	Say B	Cant	Own	Zerk	18x3.75
Blackhawk 6	Link	Del-R	Del-R	Borg	Detr 4	Un P	Sal ½	4.75	H	Gem	S 60	Own	Bijur	31x6.00
Blackhawk 8	Link	Del-R	*Del-R	Borg	Detr 4	Un P	Sal ½	4.75	H	Gem	S 60	Own	Bijur	31x6.00
Buick 8-50	Tex	Del-R	Del-R	Own	Own 3	Own	Own ½	4.54	M	Sag	S 54½	Own	Al-Z	18x5.25
Buick 8-60	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.45	M	Sag	S 55¼	Own	Al-Z	19x5.50
Buick 8-80	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.27	M	Sag	S 58⅞	Own	Al-Z	19x6.50
Buick 8-90	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.27	M	Sag	S 58⅞	Own	Al-Z	19x6.50
Cadillac 353	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	5.08	Own-M	Own	S 60	Own	Alem	19x7.00
Cadillac 452	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	4.39	Own	Own	S 60	Own	Alem	19x7.00
Chevrolet	Var	Del-R	*Del-R	Own	Own 3	Own	Own ½	3.82	M	Own	S 54	Tryon	Alem	19x4.75
Chrysler 6	Morse	Del-R	Del-R	Own	Own 3	Un P	Own ½	4.6	H	War	S 53¾	Tryon	Al-Z	19x5.00
Chrysler 70	Morse	Del-R	Del-R	Own	Own 4	Un P	Own ½	3.82	H	War	S 57¾	Rub B	Al-Z	18x5.50
Chrysler 66	Morse	Del-R	Del-R	Own	Own 3	Un P	Own ½	4.70	H	War	S 54⅝	Rub B	Al-Z	18x5.50
Chrysler 8	Morse	Del-R	Del-R	—	Own 4	—	Own ½	4.10	H	——	S 54⅝	——	Al-Z	18x5.50
Chrysler Imperial 8	Morse	Del-R	Del-R	—	Own 4	—	Own ½	3.81	H	——	S 58½	——	Al-Z	18x7.00
Cord (Fr. Wh. Dr.)	Link	Del-R	*Del-R	Long	Det 3	UnP&MM	Col F	4.41	H	Gem	S 62	Own	Bijur	18x7.00
De Soto 6	Morse	Del-R	*Del-R	Borg	Own 3	Un P	Own ½	4.6	H	War	S 53¾	Tryon	Al-Z	19x5.00
De Soto 8	Morse	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.6	H	War	S 54⅝	Rub B	Al-Z	19x5.25
Dodge 6 D D	Morse	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.9	H	War	S 53¾	Tryon	Al-Z	19x5.00
Dodge 8	Morse	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.6	H	War	S 54⅝	Rub B	Al-Z	18x5.50
Durant 6-14	Morse	Aut-L	*Aut-L	Borg	Own 3	Spic	Own ½	4.4	S D	Own	S 55	Tryon	Alem	29x5.00
Durant 6-17	Morse	Aut-L	*Aut-L	Borg	Own 4	Spic	Own ½	3.72	S D	Own	S 55	Tryon	Alem	29x5.50
Elcar 6-75	Link	Del-R	*Del-R	Long	War-G 3	Spic	Sal ½	4.88	H	Ross	S 53½	Belf	Alem	29x5.00
Elcar 140 and 130	Link	Del-R	*Del-R	Long	War-G 4	Spic	Sal ½	...	H	Ross	S 57	Belf	Alem	30x7.00
Elcar 8-95-96	Link	Del-R	*Del-R	Long	War-G 3	Spic	Sal ½	4.90	H	Ross	S 56	Belf	Alem	29x5.50
Essex	Morse	Del-R	*Aut-L	Own	Own 3	Spic	Own ½	5.4	Bendix	Gem	S 54⅝	Own	Alem	19x5.00
Ford A	Cel	Own	*Own	Own	Own 3	Own	Own ¾	3.7	M	Gem	S Tr	Own	Al-Z	19x4.75
Franklin 145	Ram	Del-R	*Del-R	Br-L	*Detr 4	Spic	Own ½	4.54	H	Gem	El 42	None	Al-Z	19x6.50
Franklin 147	Ram	Del-R	*Del-R	Br-L	Detr 4	Spic	Own ½	4.73	H	Gem	El 42	None	Al-Z	19x6.50
Gardner 136	Link	Del-R	*Del-R	Borg	War-G 4	Spic	Col ½	4.45	H	Ross	S 54	O-N	Alem	29x5.50
Gardner 140	Link	Del-R	*Del-R	Borg	War-G 3	Spic	Col ½	4.45	H	Ross	S 54	O-N	Alem	29x5.50
Gardner 150	Link	Del-R	*Del-R	Borg	War-G 3	Spic	Col ½	4.45	H	Ross	S 57	O-N	Alem	30x6.50
Graham Std. 6	Link	Del-R	*Del-R	Long	War-G 3	Un P	Sal ½	4.7	H	Ross	S 54	Tryon	Al-Z	19x5.00
Graham Spl. 6	Link	Del-R	*Del-R	Long	War-G 4	Un P	Sal ½	3.91	H	Ross	S 54	Tryon	Al-Z	18x5.50
Graham Std. 8	Link	Del-R	Del-R	Long	W C 3	Un P	Sal ½	4.45	H	Ross	S 56	Rub B	Al-Z	18x6.00
Graham Spl. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Sal ½	3.90	H	Ross	S 56	Rub B	Al-Z	18x6.00
Graham Cust. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Cla ½	3.64	H	Ross	S 58	Own	Bijur	19x6.50
Graham Cust. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Cla ½	3.92	H	Ross	S 58	Own	Bijur	19x6.50
Hudson Super 8	Morse	Del-R	*Aut-L	Own	Own 3	Spic	Own ½	4.6	Bendix	Gem	S 54⅝	Own	Alem	18x5.50
Hupmobile Cen 6	Morse	Aut-L	Aut-L	Borg	Detr 3	—	Sal	——	S D	Ross	S 53	——	Al-Z	19x5.50
Hupmobile Cen 8	Morse	Aut-L	Aut-L	Borg	Detr 3	—	Sal	——	S D	Ross	S 52¾	——	Al-Z	19x5.50
Hupmobile C	Morse	Aut-L	*Aut-L	Long	Detr 3	Un P	Own ½	4.36	S D	Ross	S 54	Own	Alem	31x6.00
Hupmobile H and U	Morse	Aut-L	*Aut-L	Long	Detr 3	Un P	Own ½	4.07	S D	Ross	S 57	Own	Alem	19x6.50
Jordan St. Line 80	Morse	Aut-L	*Aut-L	Long	War-G 3	Cle	Col ½	4.9	H	Gem	S 55¾	O-N	Alem	28x5.50
Jordan Grt. Ninety 8	Morse	Aut-L	*Aut-L	Long	War-G 3	Cle	Col ½	4.25	H	Gem	S 55¾	O-N	Alem	30x6.00
La Salle 340	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	4.54	Own-M	Own	S 58	Own	Alem	19x6.50
Lincoln	Morse	Del-R	Del-R	Own	Own 3	Spic	Tim F	4.58	Bendix	Gem	S 60	Own	Alem	20x7.00
Marmon-Roosevelt	Diam	Del-R	*Del-R	Rock	War-G 3	Spic	Sal ½	4.9	Bendix	Ross	S 54½	Tryon	Al-Z	19x5.50
Marmon Eight-69	Diam	Del-R	*Del-R	Rock	War-G 3	Spic	Sal ½	4.9	Bendix	Ross	S 56⅞	Rub B	Al-Z	19x5.50
Marmon Eight-79	Diam	Del-R	*Del-R	Rock	Detr 3	Spic	Sal ½	4.7	Bendix	Ross	S 60	Rub B	Al-Z	19x6.00
Marmon Big 8	Diam	Del-R	*Del-R	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Al-Z	19x6.50
Nash Single Six	Cel	Aut-L	*Aut-L	Borg	Own 3	Fab	Own ½	4.7	S D	Ross	S 50⅞	Tryon	Alem A	29x5.00
Nash Twin Ig. 6	Cel	*Aut-L	*Aut-L	Borg	Own 3	Own	Own ½	4.5	Bendix	Gem	S 54	Own	Bijur	29x5.50
Nash Twin Ig. 8	Diam	*Aut-L	*Aut-L	Borg	Own 3	Own	Own ½	4.5	Bendix	Gem	S 56¾	Own	Bijur	31x6.50
Oakland V-8	Morse	Del-R	Del-R	Own	Own 3	MM	Own ½	4.42	M	Sag	S 54½	Tryon	Al-Z	28x5.50
Oldsmobile	Var	Del-R	Del-R	Borg	Mun 3	Un P	Own ½	4.54	Own	Sag	S 54½	Tryon	Alem	28x5.25
Packard 726-733	Morse	N E	*Dyn	Own	Own 4	MM	Own ½	4.38	Bendix	Own	S 56	Own	Cen	*20x6.00
Packard 740-745	Morse	N E	*Dyn	Own	Own 4	MM	Own ½	4.38	Bendix	Own	S 62	Own	Cen	19x7.00
Peerless St. 8	Link	Aut-L	Aut-L	Rock	War-G 3	Spic	Sal ½	4.7	Bendix	Ross	S 56⅞	Rub B	Alem	29x5.50
Peerless Master 8	Link	Aut-L	*Aut-L	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Alem	31x6.00
Peerless Custom 8	Link	Aut-L	*Aut-L	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Alem	31x6.50
Pierce-Arrow	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.58	Bendix	Gem	S 60	Faf	Al-Z	19x6.50
Pierce-Arrow	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.08	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Pierce-Arrow	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.42	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Pierce-Arrow	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.42	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Plymouth	Cel	Del-R	*Del-R	Rock	Own 3	Own	Own ½	4.37	H	War	S 53⅝	Tryon	Al-Z	19x4.75
Pontiac	Morse	Del-R	Del-R	Own	Own 3	MM	Own ½	4.42	M	Sag	S 54	Tryon	Al-Z	29x5.00
Reo 15	Link	Del-R	Del-R	Borg	War-G 3	Spic	Sal ½	4.45	H	Ross	S 55	Rub B	Al-Z	18x5.50
Reo 20	Morse	Aut-L	Del-R	Russ	Own 3	Detr	Own ½	4.07	H	Ross	S 55	Rub B	Al-Z	18x6.00
Reo 25	Morse	Aut-L	Del-R	Long	Own 3	Detr	Own ½	4.42	H	Ross	S 55	Rub B	Al-Z	18x6.50
Ruxton (Fr. Wh. Dr.)	Link	Aut-L	Aut-L	Long	Own 3	Own	Own	4.25	H	Gem	S 55	Own	Alem	31x6.00
Studebaker Six	Whit	Del-R	*Del-R	Long	Own 3	Spic	Own ½	4.73	Bendix	Ross	S 54	Tryon	Alem	19x5.25
Studebaker Dict. 8	Var G	Del-R	Del-R	Long	War-G 3	Spic	Own ½	5.11	Bendix	Ross	S 54	Own	Alem	19x5.50
Studebaker Com. 8	Var G	Del-R	*Del-R	Long	Own 3	Spic	Own ½	4.73	Bendix	Ross	S 56	Faf	Al-Z	19x6.00
Studebaker Pres. 80	Var G	Del-R	Del-R	Long	Own 3	Spic	Own ½	4.31	Bendix	Ross	S 60	Faf	Al-Z	19x6.50
Studebaker Pres. 90	Var G	Del-R	Del-R	Long	Own 3	Spic	Own ½	4.31	Bendix	Ross	S 60	Faf	Al-Z	19x6.50
Stutz M	Link	Del-R	Del-R	Borg	Detr 4	MM	Tim ½	4.5	H	Gem	S 62¼	Own	Bijur	32x7.00
Viking Eight	Whit	Del-R	Del-R	Borg	Mun 3	MM	Own ¾	4.63	Bendix	Sag	S 58	Tryon	Alem	30x6.00
Windsor 6-69	Morse	Aut-L	*Aut-L	Borg	War-G 3	MM	Col ½	4.9	H	Ross	S 54	O-N	Alem	29x5.25
Windsor 6-72	Link	Del-R	*Del-R	Borg	War-G 3	MM	Col ½	4.9	H	Ross	S 54	O-N	Alem	29x5.50
Windsor 6-77	Link	Del-R	*Del-R	Borg	War-G 4	MM	Col ½	3.9	H	Ross	S 54	O-N	Alem	29x5.50
Windsor 8-85	Link	Del-R	*Del-R	Borg	War-G 3	MM	Col ½	4.63	H	Ross	S 54	Own	Alem	31x6.00
Windsor 8-92	Link	Del-R	*Del-R	Borg	War-G 4	MM	Col ½	3.9	H	Ross	S 54	Own	Alem	31x6.50
Whippet 96 A	Morse	Aut-L	*Aut-L	Borg	Own 3	MM	Own ½	4.55	*Bendix	Own	S 49½	Tryon	Alem	19x4.75
Whippet 98 A	Morse	Aut-L	*Aut-L	Rock	Own 3	MM	Own ½	4.55	*Bendix	Own	S 53	Tryon	Alem	19x5.00
Willys-Six 98 B	Morse	Aut-L	*Aut-L	Borg	Own 3	MM	Own ½	4.09	Bendix	Own	S 49¾	Tryon	Alem	19x5.00
Willys 8-80	Morse	Aut-L	*Aut-L	Borg	Own 3	MM	Own ½	4.4	Bendix	Ross	S 56	Tryon	Alem	19x5.50
Willys-Knight 66 B	Morse	N E	*N E	Rock	Own 3	MM	Own ½	4.6	Bendix	Ross	S 57½	Own	Bijur	19x6.00
Willys-Knight 87	Morse	Aut-L	*Aut-L	Rock	Own 3	MM	Own ½	4.89	Bendix	Own	S 53	Tryon	Alem	19x5.50

Service Notes

Newark, N. J., Aug. 20.—A refund of $799,106 on income taxes paid to the United States government for 1918 is sought by the Kelly-Springfield Tire Company of Jersey City in a suit filed in Federal Court in Newark by Jacob L. Newmann, attorney. Simultaneously a suit was brought in New York against Frank A. Bowers, collector of internal revenue, for a $259,235.09 refund on income taxes paid by the company for 1919 and 1920. The company seeks the return of taxes totaling $1,058,341.09.

Lyndhurst, N. J., Aug. 20.—Harry's Service Station, Inc., has been formed here and is capitalized at $125,000. Alfred H. Cranshaw, Joahnetta Cranshaw, George H. Hibberd and Mabel Hibberd, Lyndhurst, are the directors.

Asheville, N. C., Aug. 20.—A general automobile repair shop is to be opened at 14 Walnut St. by Ralph B. Lindsey, a mechanic, who has been in the business in Asheville for the past twenty years. Associated with him are R. J. Hendrix, George Anderson, Coleman Peek and W. W. Colley.

Paton, Ia., Aug. 20.—Glenn Tomlinson of this city has purchased the Paton Garage and is operating it as the Tomlinson Garage. He was a mechanic in the shop several years and his purchase included the building and all equipment. He plans several improvements and service extensions.

Kelso, Wash., Aug. 20.—In a contest among Fisk dealers of the Pacific Northwest, termed the Fisk air flight endurance contest, the New Method Tire Shop of Kelso has been declared the winner of the fourth lap and Yaden & Marsh, the proprietors, have been awarded a miniature model Fisk tri-motored plane as a prize.

DEALER CAR STOCKS REDUCED TO 350,000

(Continued from Page 1)

tions in this country. The production is put at 230,000, while on the bass of the returns from the first fifteen states the retail sales are being estimated at 265,000, a difference of 35,000. This was the first time this year that sales exceeded the output.

The more favorable relationship this year between production and sales is clearly illustrated in the figures for the first seven months of the year. The production of passenger cars in the United States, with July estimated, amounted to 2,125,000, while the retail sales, as indicated by registrations, were 1,918,610, with July estimated.

The difference between the actual production in the United States and the actual sales in this country in the first seven months of this year was approximately 206,396, equivalent to only 9 per cent.

In the first seven months of last year production of cars in this country amounted to 3,188,241, as compared with retail sales of 2,588,544, leaving an indicated surplus of 599,433, or 18 per cent.

The improvement this year over the last in the indicated surplus of cars was not as great as indicated by the foregoing figures, for the reason that last year a larger percentage of the surplus went into the export than was the case in the first seven months of this year. It is safe to say, however, that the percentage of difference between production and retail sales and exports this year has been only about 60 per cent. as great as in the first seven months of last year. Figures for exports are available only through May and it is difficult to estimate them this year because of the unsettled conditions.

The following table shows the production of passenger cars in the United States for the first seven months of this year, as compared with the retail sales:—

	Production	Registrations
January	236,145	180,094
February	296,461	211,645
March	335,720	298,824
April	374,913	357,064
May	362,522	345,041
June	289,245	260,942
July	*230,000	*265,000
Totals	2,125,600	1,918,610

*Estimated.

Here are the corresponding figures for last year:—

	Production	Registrations
January	345,545	219,844
February	404,063	235,337
March	511,577	378,346
April	535,878	481,896
May	514,863	454,153
June	451,371	386,537
July	424,944	432,695
Totals	3,188,241	2,588,408

In the Bus Field

Wellsville, N. Y., Aug. 20.—The Hornell-Allegany Bus Corporation is seeking permission to extend its service to Olean by way of Belmont, Belvidere, Friendship and Cuba. The company has successfully operated buses between Wellsville and Hornell for the past fifteen years. The company plans to use the latest improved type of parlor coaches.

Auburn, N. Y., Aug. 20.—The Cayuga Omnibus Corporation has been granted a certificate of convenience and necessity for the operation of a motor bus line between the cities of Auburn and Syracuse. The certificate granted the company prohibits it from carrying local passengers within the city limits of Syracuse, as set forth in the consent granted by the city.

Richmond, Va., Aug. 20 (UTPS).—Six new buses have been purchased by the Eastern Service Lines and will be placed in the near future. The new buses are equipped with padded baggage racks, drinking fountains, washroom and toilet, reclining seats and deep-cushioned chairs. According to the present purchasing program, every bus on the line, which runs from Washington, D. C., to Knoxville, Tenn., will be new.

Production--Engineering--Factory

National Metal Congress Program Announced

THE 1930 national metal congress, which will convene in Chicago the week of September 22, will have thirty-five technical sessions on its program. The American Society for Steel Treating, the Amereican Welding Society and the American Society of Mechanical Engineers are each devoting eight sessions to the presentation of technical papers. The American Institute of Mining and Metallurgical Engineers will have seven such sessions.

Meetings of the American Welding Society will be held in the Congress Hotel, but the National Metal Exposition and the technical sessions of the other societies in the Congress will be held in the Hotel Stevens. More than 175 firms will exhibit their products at the exposition, according to W. H. Eisenman, secretary of the A. S. S. T., which sponsors both the congress and exposition.

In addition to its technical programs, the A. S. S. T. has arranged a session on sales problems and methods. Prof. R. C. Borden and Alvin C. Busse of New York University will present a dramatized lecture on sales strategy, and other talks of similar nature are scheduled.

The American Society for Steel Treating has arranged the following program:

Monday Morning, September 22

Corrosion and Heat Resistant Nickel-Copper-Chromium Cast Iron—J. S. Vanick and P. D. Merica, International Nickel Company, New York.

Fatigue Tests of Small Specimens With Reference to Size Effect—R. E. Peterson, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

Physical Properties of Fine Bolts—H. B. Pulsifer, Ferry Cap and Set Screw Company, Cleveland.

Electrolytic Decomposition of Cementite and Austenite — H. A. Schwartz, G. M. Guiler and H. H. Johnson, National Malleable and Steel Castings Company, Cleveland.

Monday Afternoon, September 22

Stresses and Cracks in Hardened and Ground Steel—G. R. Brophy, General Electric Company, Schenectady.

Cemented Tungsten Carbide — Gregory J. Comstock, Firth-Sterling Steel Company, McKeesport, Pa.

Estimation of Internal Stress in Quenched Hollow Cylinders of Carbon Tool Steel—O. V. Greene, Carpenter Steel Company, Reading, Pa.

Cold Heading Die Life—A. S. Jameson, International Harvester Company, Chicago.

Effects of Pre-Quenched Treatments on the Hardness, Body and Structure of Hardened Tool Steel—R. H. Harrington, General Electric Company, Schenectady.

Tuesday Morning, September 23
Sales Session

Tuesday Afternoon, September 23

Forging Practice, U. S. Naval Gun Factory—S. L. Blankenship, Naval Gun Factory, Washington, D. C.

Heat Treatment Furnaces Used in Manufacture of Telephone Equipment—W. A. Timm, Western Electric Company, Chicago.

Scaling of Steel at Forging Temperatures—W. E. Jominy and D. W. Murphy, University of Michigan, Ann Arbor.

Copper Brazing in Hydrogen Electric Furnaces—H. J. Webber, General Electric Company, Schenectady.

Wednesday Morning, September 24
Campbell Memorial Lecture

Oxygen in Steel—Dr. Marcus A. Grossmann, Republic Steel Corporation, Canton.

Wednesday Afternoon, September 24

Radiography by the Use of Gamma Rays—R. F. Mehl, Naval Research Laboratory, Washington, D C., G. E. Doan and C. S. Barrett.

Critical Ranges in Pure Iron-Carbon Alloys—R. H. Harrington, General Electric Company, and W. P. Wood, University of Michigan, Ann Arbor, Mich.

Relationship Between Welded-On Overlays and Heat Treatment—Miles C. Smith, Stoody Company, Whittier, Cal.

The Tungsten Carbon System—W. P. Sykes, General Electric Company, Cleveland.

Concentrated Pressure and Its Applications to the Rolling Process—Dr. A. Nadai, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

Thursday Morning, September 25

Influence of Nickel on the Chromium - Iron - Carbon Constitutional Diagram—V. N. Krivobok, Carnegie Institute of Technology, and M. A. Grossmann, Republic Steel Corporation, Canton.

Study of a High-Chromium, Low-Carbon Steel—Arthur Phillips, Yale University, and R. W. Baker, Republic Steel Corporation.

Corrosion Test for Research and Inspection of Alloys—W. R. Huey, E. I. du-Pont de Nemours & Co., Wilmington, Del.

Nature of the Nickel-Chromium Stainless Steels—Edgar C. Bain and Robert H. Aborn, United States Steel Corporation, Kearny, N. J.

Thursday Afternoon, September 25

Process Reliability in Steel Making—George A. Dornin, Gathmann Engineering Company, Baltimore.

Tensile Properties of Carbon Steel Castings—R. L. Dowdell and J. V. McCrae, Bureau of Standards, Washington.

Casting Guns by the Centrifugal Process—Col. Tracy C. Dickson, Watertown Arsenal, Watertown, Mass.

Steel Ingots—H. H. Ashdown, Irvine, Pa.

Friday Morning, September 26

Nitriding in Packing Materials and Ammonia—A. B. Kinzel and J. J. Egan, Union Carbide and Carbon Research Laboratories, Long Island City.

Further Investigations in Nitriding—Robert Sergeson and H. J. Deal, Republic Steel Corporation, Massillon.

Nitriding the Larger Forgings—J. H. Higgins, Camden Forge Company, Camden, N. J.

Nitriding Furnaces and Their Equipment—W. J. Merten, Westinghouse Electric & Manufacturing Company, East Pittsburgh.

Michocharacter Hardness Tester—C. H. Bierbaum, Lumen Bearing Company, Buffalo, N. Y.

Friday Afternoon, September 26

Relation of Structure to Surface Hardness of a Case-Hardened Steel—H. W. McQuaid and O. W. McMullan, Timken-Detroit Axle Company, Detroit.

Recent Developments in Gas Carburization—O. J. Wilbor and J. A. Comstock, People's Gas Light and Coke Company, Chicago.

Modifying Action of Ferrosilicon upon the Process of Carburization—E. G. Mahin and F. J. Mootz, Notre Dame University, Notre Dame, Ind.

Resistance of Steels to Abrasion by Sand—Samuel J. Rosenberg, Bureau of Standards, Washington.

Metastable Equilibrium in Hypereutectoid Iron-Carbon Alloys—A. A. Bates and D. E. Lawson, Case School of Applied Science, Cleveland; H. A. Schwartz, National Malleable and Steel Castings Company, Cleveland.

The following papers will be presented before the American Welding Society:

The Examination of Welds by the X-Ray Diffraction Method—J. T. Norton, Massachusetts Institute of Technology.

Fatigue Investigations of Welded Joints—G. E. Thornton, State College of Washington.

Stress Distribution in Welded Joints—Milton Male, University of Pittsburgh.

Testing of Welds — Gilbert E. Doan, Lehigh University.

Welded Steel Bar Joists—Frank Burton, Steel Joist Institute.

Cost of Using Welding—Robert E. Kinkead, consulting engineer.

Strength of Welded Joints in Tubular Members for Aircraft—H. L. Whittemore, United States Bureau of Standards.

Tensile Tests for Welds—J. W. Owens.

Bend Tests for Welds—W. B. Miller.

Shear Tests for Welds—Andrew Vogel.

Impact and Fatigue Tests for Welds—C. H. Jennings.

Double Lengthening Railroad Rails—L. C. Ryan, Oxweld Railroad Service Company.

Building Up Battered Ends of Rails—Authors to be announced later.

Welded Steel Tubing—J. S. Adelson, Steel and Tubes, Inc.

Magnetic Testing of Butt Welds—T. R. Watts, Westinghouse Electric & Manufacturing Company.

Welding of Stainless Steel—L. W. Hostettler, Allegheny Steel Company.

Arc Welding of Aluminum—W. M. Dunlap, Aluminum Company of America.

Oxy-Acetylene Welding of Corrosion Resisting Steels—W. B. Miller, Union Carbide and Carbon Research Labs.

The iron and steel and machine shop practice divisions of the American Society of Mechanical Engineers will sponsor this program:

Phenol Rseinoid Molding Technique—Consideration of engineering factors involved in the replacement of metals by synthic plastics—Leon V. Quigley, Bakelite Company, New York.

Production of Plastic Telephone Parts—A. M. Lynn, Western Electric Company, Chicago.

Flange Type Motor Mounting—Herbert Chase, McGraw-Hill Publishing Company, New York.

The Mechanical Design of Electric Motors, as Regards Standardization and Interchangeability — J. L. Browne, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

Automatic Polishing—Robert T. Kent, Devine Brothers, Utica, N. Y.

Repair of Worn Parts by Electro Deposition of Iron—T. P. Thomas, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

Case-hardening with Ammonia Gas—V. O. Homerberg and J. P. Walsted, Massachusetts Institute of Technology, Cambridge.

Nitriding Analyses—Their Physical Properties and Adaptability—R. Sergeson and M. M. Clark, Central Alloy Steel Company, Canton, O.

Report of Anti-Friction Heavy Duty Bearing Committee.

General Design and Construction of Hot Saws for Cutting Heavy Structural Steel Sections—A. B. Pearson, Carnegie Steel Company, Munhall, Pa.

The Manufacture of Large Weldless Forged Steel Pressure Vessels—J. L. Cox, Midvale Company, Philadelphia.

The Manufacture of Large Welded Pipe—Leon Cammen, consulting engineer, New York.

Straightening of Steel by Rolling—J. Blair Sutton, Sutton Engineering Company, Pittsburgh.

The Application of Metallic Recuperators to Industrial Furnaces—G. W. Mantle, Surface Combustion Company, Pittsburgh.

Continuous Reheating Furnaces for Rolling Mills—A. L. Culbertson, Rust Engineering Company, Pittsburgh.

Manual Semi-Automatic Devices for the Protection Against Wind of Ore Bridges and Similar Structures—C. O. Burton, Minnesota Steel Company, Duluth, Minn.

Notes on the Production, Purification and Uses of Blast Furnace Gases—William A. Haven, Arthur G. McKee Company, Cleveland.

Combustion of Gas in Blast Furnace Stoves—H. W. Paret, Jr., Swindell-Dressler Company, Pittsburgh.

The program of the American Institute of Mining and Metallurgical Engineers will include the following papers:

Monday, September 22

10 a. m.—Iron Ore Session.

Iron and Steel Division.

W. J. McKenzie, chairman.

C. E. Williams, vice-chairman.

Some Aspects of the Iron Ore Situation.—By F. B. Richards. (M. & M.)

Beneficiation of Iron Ores From the Blast Furnace Viewpoint.—By Ralph Sweetser. (M. & M.)

Resistence of Iron Ores to Decrepitation and Mechanical Work.—By T. L. Joseph and E. P. Barrett.

2 p. m.—Iron Ore Round Table Iron and Steel Division,

C. B. Murray, chairman.

T. L. Joseph, vice-chairman.

Tuesday, September 23

10 a. m.—Hotel Stevens, South Hall Room.

A. I. M. E. members are invited to attend A. S. S. T. session on "Salesmanship."

12 m.—Luncheon Meeting, Executive Committee, Institute of Metals Division. Dining Room No. 9.

2 p. m.—Joint Session on Theoretical Metallurgy, Institute of Metals and Iron and Steel Divisions.

S. L. Hoyt, chairman.

M. A. Grossman, vice-chairman.

Studies upon the Widmanstatten. I. Introduction. The Aluminum-silver System and the Copper-silicon System.—By Robert F. Mehl and Charles S. Barrett. (T. P. 353).

Cemented Tungsten Carbide.—By L. L. Wyman and F. C. Kelley. (T. P. 354).

Transformation of Austenite at Constant Subcritical Temperatures.—By E. S. Davenport and E. C. Bain. (T. P. 348).

6.30 p. m.—Joint Dinner of Institute of Metals and Iron and Steel Divisions. (Informal. Ladies invited).

Dr. B. D. Saklatwalla, vice-president Vanadium Corporation of America, will give a non-technical talk on Vanadium.

Wednesday, September 24

12 m.—Luncheon Meeting Papers Committee, Institute of Metals Division.

2 p. m.—General Technical Session. Institute of Metals Division.

W. R. Webster, chairman.

R. S. Dean, vice-chairman.

Influence of Casting Practice on the Physical Properties of Die Castings. By Charles Pack. (T. P. 346.)

Effect of Certain Alloying Elements on Structure and Hardness of Aluminum Bronze. By Selma F. Hermann and Frank T. Sisco. (T. P. 365.)

Thermal Conductivity of Copper Alloys. Part II.—Copper-tin Alloys. Part III.—Copper Phosphorus Alloys. By Cyril Stanley Smith. (T. P. 360.)

Application of X-Rays to Development Problems Connected with the Manufacture of Telephone Apparatus. By M. Baeyertz. (T. P. 349.)

6.30 p. m.—Meeting, A. S. T. M.; committee B6. Die cast metals and alloys. Dining room No. 1, Stevens Hotel.

Thursday, September 25

8 a. m.—Nonferrous metal plant visitations.

10 a. m.—Alloys session; iron and steel division. Jerome Strauss, chairman; A. B. Kinzel, vice-chairman.

Practical Observations on the Manufacture of Basic Open-Hearth High-Carbon Killed Steel. By W. J. Reagan. (T. P. 347.)

Development of Casting for Deep Wells. By F. W. Bremmer.

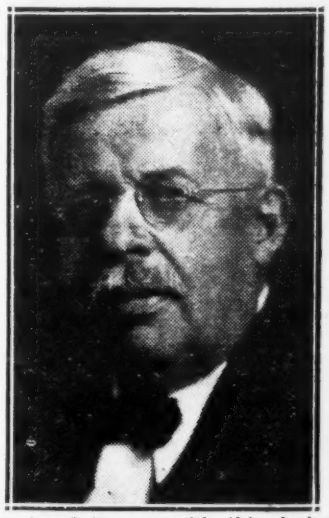
Manufacture of Basic Open-Hearth Steel of Forging Quality. By William R. Fleming.

2 p. m.—Aluminum session, Institute of Metals divisions. H. W. Gil-

(Continued on Page 11)

Meet the Engineers

TO acquaint its readers with the important, but unsung, members of the automotive fraternity—the engineers who design and build the nation's cars—Automotive Daily News is publishing a series of brief biographies of the engineers of companies producing automobiles, automotive equipment, parts and accessories. These biographies will cover the training and experience of leading engineers and their outstanding contributions to the progress of our industry.



CHARLES R. GREUTER, chief chassis engineer. Mr. Greuter, known as the "Pop Greuter" of earliest automobile and racing days, began building motors and automobiles in 1896. At this time he built several two-cylinder cars. The first of these engines had suction valves. Mr. Greuter probably built the first four-cylinder car ever made in the United States in 1901. This car was entered in the New York-Buffalo race in 1901 by the Robinson Company, which later became Pope-Robinson Manufacturers.

In 1902 he began work on engines embodying the overhead camshaft principle and the following year built five cars using this type of motor. In 1904 he sold this engine to the Matheson Motor Car Company, Ltd., of Holyoke, Mass., and joined the company as mechanical engineer. The Matheson Company used the Greuter designed engine until the dissolution of the business in 1914. In 1906, Mr. Greuter built a six-cylinder engine for the Matheson Company with the cam shaft over the valves. This motor proved mechanically successful, but as the Matheson dealers claimed the public never would accept a six-cylinder motor, the idea was dropped.

There are certain other interesting facts, or sidelights, in Mr. Greuter's history, which attest his intimate connection with the earliest of engineering achievements in automotive engineering.

As early as 1897 Mr. Greuter built what in all probability was the first electrically equipped motor car in the world—a car equipped with electric lights, a battery for starting and a generator for operating. He made the generator by rewinding a small motor.

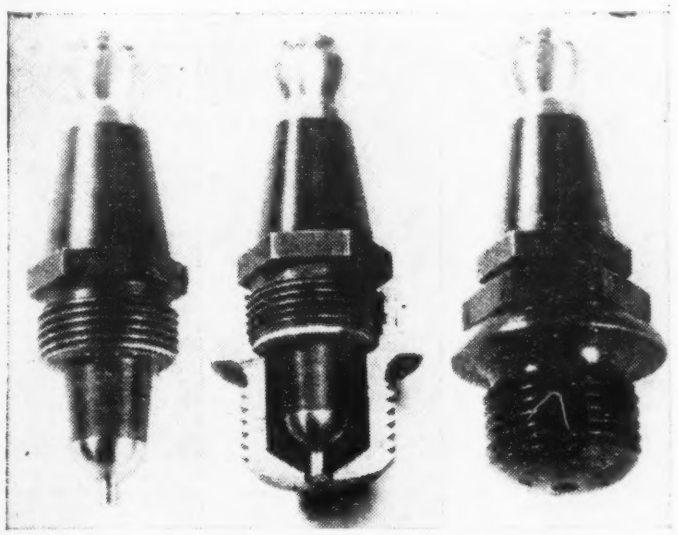
Another instance occurred in 1904, when he designed and built what probably was the first self-starter ever made. The Matheson Company equipped its cars with this device and advertised the cars as "Self-starting from the seat."

In 1909 Mr. Greuter resigned his post with the Matheson Company to take up independent experimental work. As a result of his independent research and experimenting then begun, the present Stutz vertical eight overhead valve type of engine was developed. In 1920 Mr. Greuter built a four-cylinder engine embodying the form of overhead valve used in the new Stutz vertical eight for the Excelsior Motor Manufacturing and Supply Company. The Excelsior company never pushed the type, so, in 1923, he built two eight-cylinder motors along similar lines.

Mr. Greuter, who was an associate engineer with the Stutz organization in 1925, joined the Stutz factory organization in the early part of 1926 and he is now chief chassis engineer of the Stutz Motor Car Company of Indianapolis.

Equipment - - - Development

H-T Aviation Spark Plug Appears on Market



H-T Aviation plug core assembly. Cut-away view of H-T plug. Complete assembly of H-T spark plug.

THE Hurley-Townsend Corporation, 305-313 East 45th St., New York city, recently incorporated to manufacture and distribute a new product, the H-T spark plug.

The plug was designed by Roy T. Hurley, formerly general manager of the B-G Corporation.

The manufacturers claim that the new H-T copper cooled plug represents a distinct departure from usual design and largely circumvents the dangers of pre-ignition and fouling. Use is made of the principle that copper conducts heat ten times as fast as steel. The large center electrode is surrounded by a copper tube which conducts the heat away from the nose of the plug. This feature of design permits higher compression without unduly shortening the length of the nose. Laminated mica insulation is used and, it is stated, compression tightness is obtained by the expansion of the copper tubing around the center electrode during manufacture.

The manufacturers state that extensive tests prove that the new H-T copper cooled spark plug is capable of running at high temperatures and compressions without causing preignition. The plug has also operated under varying conditions without fouling.

WALTER L. CHENEY DIES AT HOME IN MERIDEN

Meriden, Conn., Aug. 20.—Walter L. Cheney, for the past thirty-five years sales engineer for the Lucas Machine Tool Company of Cleveland, O., died at his home here. He was a member of the A. S. M. E., the American Association for the Advancement of Science, the National Geographic Society and the Machinery Club of New York. Mr. Cheney learned the machinist's trade in the Pratt & Whitney shop at Hartford. He was associate editor of Machinery at one time and a contributor to that and other trade papers.

NATIONAL METAL CONGRESS PROGRAM

(Continued from page 10)

lette, chairman; H. S. Rawdon, vice-chairman.

Constituents of Aluminum-Iron-Silicon Alloys. By William L. Fink and Kent R. Van Horn. (T. P. 351.)

Aluminum - Silicon - Magnesium Casting Alloys. By R. S. Archer and L. W. Kempf. (T. P. 352.)

Equilibrium Relations in Aluminum-Antimony Alloys of High Purity. By E. H. Dix, Jr., F. Keller and L. A. Willey. (T. P. 356.)

Equilibrium Relations in Aluminum-Magnesium Silicide Alloys of High Purity. By E. H. Dix, Jr., F. Keller and R. W. Graham. (T. P. 357.)

Modulus of Elasticity of Aluminum Alloys. By R. L. Templin and D. A. Paul. (T. P. 366.)

Quenching of Alclad Sheet in Oil. By H. C. Knerr.

Experiments on Retarding the Age Hardening of Duralumin. By E. H Dix, Jr., and F. Keller.

Manley Manufacturing Markets New Elevator

The Manley Manufacturing Company, Bridgeport, Conn., announces a new hydraulic automobile elevator in both wheel and axle types.

The elevators are operated by a 9½-inch ram, with a capacity of 6,000 pounds.

Oil pipes and other connections are eliminated, which minimizes the possibility of damage to the equipment.

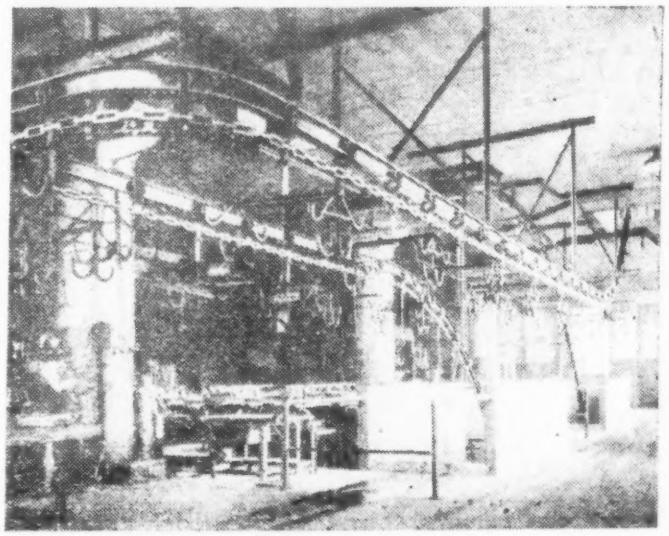
The stuffing box has a bevel seat and gland.

The front-axle pad of the axle-type elevator has a saw-tooth surface, designed to prevent the car from slipping sidewise.

TRIPLE-A-FILE COMPANY TO GET WISCONSIN CHARTER

Milwaukee, Wis., Aug. 20.—The Triple-A-File Company of this city, manufacturer of special type files, used in the production of automobile bodies, is incorporating, according to an announcement by E. A. Anheuser, president.

Transue & Williams Makes Drop Forged Chain

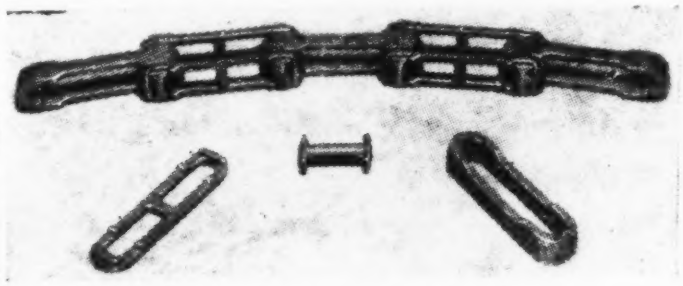


USE of T. & W. drop-forged chain for conveyor system

The Transue & Williams Steel Forging Corporation, Alliance, O., is the maker of drop forged chain, which is used to a large extent for conveyor systems in the automobile industry.

The features claimed by the manufacturer of the T. & W. chain are that it is drop-forged, rivetless and easily assembled. The stretch is taken out of the chain before shipment. The component parts are interchangeable. It is assembled in ten-foot strands for easy handling on delivery. The chain will flex laterally as well as around sprockets. It will travel freely on a five-foot radius curve.

For special requirements, the chain is available in special heat and acid resistant metals.



TYPICAL link assembly T. & W. chain

Cumulative New Commercial Car Registration Statistics, July, 1930

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Arkansas		2	236		4		1		310	6	38	1			1						2	6	6		1	608	Arkansas
Delaware	1	2	32		2				56	7	6				1				1		1	1	1			111	Delaware
Florida		7	99		3	1			233	2	19	3			3		1					5	2			378	Florida
Illinois	5	16	516	41	50		2	14	874	34	110	17	2		19	2		8	1		8	21	21		60	1821	Illinois
Minnesota		3	255	11	22	1	7	4	502	21	94	2	1		18		1			1	5	2	21		11	982	Minn.
Montana			68		3	1	1	1	123	3	33				5		1				2	1	1			243	Montana
N. Hamp.		1	39	5	6				121	4	5	7			5		2		1	1		1	1		3	202	N. Hamp.
N. Dakota			50	3	2		1		74	1	46				5		2						2			186	N. Dakota
Rh. Island	3	3	41	2	4		2	1	124	9	5	1			3			1	1	1		2				203	R. Island
S. Carolina		1	125					2	171	3	10											1			12	325	S. Car.
S. Dakota		3	71	6	7		1		126	3	50				5		1				2		5		1	281	S. Dakota
Utah			48		4		1		127	4	6	1			1										4	196	Utah
W. Virginia		6	144	3	17			2	202	17	42			3	8	1	3			2		2	4		8	464	West Va.
Wisconsin		8	564	23	40	2	4	11	784	37	125	4		2	23			4	8	4	9	3	24	1	21	1701	Wisconsin
Dist. of Col.	5		27	3	2				105	6	7				1			1				3			5	165	D. of Col.
Totals	14	52	2315	97	166	5	20	35	3932	157	596	36	3	5	98	3	11	14	12	9	29	48	82	1	126	7866	Totals
Ark., 1929		5	400		26		8		513	12	83	1			4		1			4	15	3			11	1086	Ark., 1929
Del., 1929	2	1	57		4				67	10	10				1						1			1		154	Del., 1929
Fla., 1929		3	168		19				351	10	17	1			8					2	3	7				589	Fla., 1929
Ill., 1929	12	14	791	88	159		27	12	1149	49	195	31		2	46	1		10	3		51	23			124	2787	Ill., 1929
Minn., 1929			339	3	48		8	11	471	28	95	4			25		1			4	26	15			20	1098	Minn., '29
Mont., 1929			51		12		2		131	4	27				4	1	1			2	3	4				242	Mont., '29
N. H., 1929	1	6	71	1	18		1	2	133	9	15	3			12		1	1	1	1	3	2			1	282	N. H., '29
N. Dak., '29			100	1	13		5	1	98	5	70				2						1				2	298	N. D., 1929
R. I., 1929	3	1	68		26		1	2	88	17	6	13			29		3	4	5	2	3	3			5	279	R. I., 1929
S. Car., '29		16	200		9		10	3	224	5	12	2			1	1	1		1	1	4	2			4	496	S. C., 1929
S. Dak., '29			203	1	19		2	1	175	12	103	1			12		1			3	10	1		1	2	547	S. D., '29
Utah, 1929			53		13				101	8	7				5		2			1	2					192	Utah, '29
W. Va., '29		8	202	3	45		2	3	260	18	48			2	16	1	1		5	3	5	5		1	7	635	W. Va., '29
Wis., 1929	1		499	15	64		10	8	746	39	121	5		2	54		3	17	8	2	35	8		1	24	1662	Wis., 1929
D. of C., '29	1	2	35	5	2				137	6	4	1			4				2		3	14			3	219	D. C., '29
Totals	20	56	3237	117	477	*	76	43	4644	232	813	62	*	6	223	4	15	32	25	25	165	87	*	4	203	10566	Totals

*Not in production at that time.

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